ABSTRACT

Title of Thesis: SUSTAINABLE COMMUNITY PLANNING

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Stasis is not a condition of life, things are constantly evolving. Design excellence is achieved through a proactive effort to foresee, and be equipped for, this metamorphosis. This thesis argues that for design to truly be sustainable it must accommodate this need for change. There are two scales to be considered in community design: the urban scale and the building. Careful consideration about current conditions and projected growth is often given to the design of urban infrastructure (sewer, roads, water, etc.). The same consideration must be given when designing the infrastructure meant to serve the civic needs of the community. Investment in public buildings and open spaces is a commitment to the present and future states of a community and, thus, must be able to adapt as those states change.

The focus area for this thesis is Landover, Maryland. Considered a part of the Washington, DC suburbs, Landover is a conglomerate of small residential communities who lack connectivity. While it once held a place as a regional destination, Landover's prominence has diminished. Nothing is a greater indicator of this condition than the abandoned shopping mall. This thesis first explores how the mall site can be reintegrated into the fabric of the community and reincarnated as a place where their needs can be served. Next, this thesis explores ways in which municipal buildings can be design to play a larger role in supporting the present and future needs of the community.

SUSTAINABLE COMMUNITY PLANNING

by

Kristina Rebecca Crenshaw

Thesis submitted to the Faculty of the Graduate School of the
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INTRODUCTION:

Community is a catch phrase that encompasses many different meanings. In general community is used to describe a group of people who share a common bond or interest. People form communities based on profession, religion, or class. For this thesis community is defined as a group of individuals for whom this common bond is the result of residing within the same geographical area.

Robert Putnam states in his book Bowling Alone that "the core idea of Social Capital theory is that social networks have value [and] social contacts affect the productivity of individuals and groups." [1] These social networks are established through both formal and informal means. The phrase "it's not what you know but who you know" is often thrown around. As much of a cliché as it has become it is indicative of the way our society functions. An isolated individual finds it harder to get ahead. A person who has involved him/herself in networks finds that he/she is better equipped to locate the types of information and support he/she needs to thrive. The same can be said of the built environment. A neighborhood can be more productive and effective if it is part of a larger city that is connected as part of a regional network.

In the urban environment the sense of connectivity and community is much more apparent. In the suburban environment, ideas of connectivity and community seem to be disappearing. An oversimplified explanation of this phenomenon is that the urban environment is pedestrian oriented, allowing people to connect as they go about their daily activities, while the suburban environment is automobile oriented, effectively

[1] Robert D. Putnam, Bowling Alone (New York: Simon & Schuster, 2000) 19.

segregating people from each other. The prevailing question is how does one design for community in the automobile driven society.

There are three scales to consider in physical and social design of a community, urban, building, and the individual person. Many design professionals hope to influence the formation of a community by addressing the first two scales, the urban and the building. These environments are designed with a focus on providing spaces that can bring large groups of people together. While an environment conducive to social interaction is a start, focus on the built environment alone is not effective. Consideration must be given to the needs of the individual person; these needs are more commonly addressed by social scientist than design professions.

This thesis looks at social services, urban design, and architecture and how each of these disciplines works to build social capital and community. Chapter one starts by outlining the philosophies and methods used by each, first describing how each of those philosophies contributes to the building of community, then by understanding their various strengths and weaknesses and how they can begin to benefit form each other.

Chapter two is an analysis of Landover, Maryland's current community make-up. Included in this analysis is information about the individuals who live in the community, what kinds of services are available to them and where those services are located. This chapter also looks at the geographic conditions, focusing on how the neighborhoods are connected as part of a larger community, and that community's place in the region.

Chapter three outlines the development of the program for the Community Center. The program is developed first by looking at what philosophies and methods dictate should be included, then by looking at limitations to the program imposed by the site.

Chapter four addresses the issue of pedestrian connectivity. This section focuses on crossing the street on grade, below grade, and by bridge with an emphasis on how each of these can be accomplished in a way that makes them feel as if they were part of the natural pedestrian experience.

Chapter 5 looks at two architectural approaches to design. First is the analysis of systems building, used for its ability to provide a building that will be able to change as the needs of the community change. Next is the analysis of building skins and their ability to influence and change a person's experience within, and relationship to, the building.

Chapter six outlines the process of determining the placement and physical form of the Community Center. It also discusses the same for the residential and commercial uses that are to be located adjacent to the center.

Chapter seven presents the final solutions to these three scales: urban design for the community, architecture for the community, and the detail of the building skins.

Chapter 1: Philosophies and Methods

Philosophy consists very largely of one philosopher arguing that all others are jackasses. He usually proves it, and I should add that he also usually proves that he is one himself.

~ H.L. Mencken

This chapter begins to explore how one designs for the three scales of connectivity (urban, building, and people) by focusing on the three disciplines that deal with each (urban design, architecture, and social services). Each of these disciplines influences the establishment of community in a different way, and for that reason each has been analyzed independently. More importantly, each of these disciplines can begin to influence the other as one considers the best approach to community design. The conclusion of this chapter is a comparison between the three disciplines and how they can benefit from each other.

Social Services and the Building of Social Capital

Social Services focus on connecting the individual person to the services that will allow him/her to improve his/her situation in life. Part of a person's self-improvement process is dependent on a connection to the greater community as a whole; for it is the community network that provides the support and opportunities the individual needs to continue personal growth. That person in turn can begin to contribute to the growth of the community as whole. It is this concept of reciprocity that is embodied in the Wraparound Philosophy.

The Wraparound Philosophy is an example of value-based service delivery. As opposed to methods of treatment that focus on problems and providing solutions, value-based service focuses on using existing strengths to build increased competency in individuals. The Wraparound Philosophy embraces ten principles which emphasize the role of community on different levels. The ten principles, as well as their application to this thesis are outlined in the chart on the following page.

Ten Principles of the Wraparound Philosophy	Applied to thesis
Family Voice and Choice: Family and youth perspectives are intentionally elicited and prioritized during all phases of the wraparound process. Planning is grounded in family members' perspectives, and the team strives to provide options and choices such that the plan reflects family values and preferences.	
Team Based: The wraparound team consists of individuals agreed upon by the family and committed to them through informal, formal, and community support and service relationships	Yes
Natural Supports: The team actively seeks out and encourages the full participation of team members drawn from family members' networks of interpersonal and community relationships. The wraparound plan reflects activities and interventions that draw on sources of natural support.	
Collaboration: Team members work cooperatively and share responsibility for developing, implementing, monitoring, and evaluating a single wraparound plan. The plan reflects a blending of team members' perspectives, mandates, and resources. The plan guides and coordinated each member's work towards meeting the team's goals.	Yes
Community Based: The wraparound team implements service and support strategies that take place in the most inclusive, most responsive, most accessible, and least restrictive setting possible; and that safely promote child and family integration into home and community life.	Yes
Culturally Competent: The wraparound process demonstrates respect for and builds on the values, preferences, beliefs, culture, and identity of the child/youth and family, and their community.	
Individualized: To achieve the goals laid out in the wraparound plan, the team develops and implements a customized set of strategies, supports, and services.	
Strengths Based: The wraparound process and the wraparound plan identify, build on, and enhance the capabilities, knowledge, skills, and assets of the child and family, their community, and other team members.	
Persistence: Despite challenges, the team persists in working toward the goals included in the wrap around plan until the team reached agreement that formal wraparound process is no longer required.	
Outcome based: The team ties the goals and strategies of the wraparound plan to observable or measurable indicators of success, monitors progress in terms of these indicators, and revises the plan accordingly.	

Figure 1: The 10 Principles of Wraparound
These principles are used mainly for their ability to help in the development of program requirements for community based services. .

The first level of community addressed by Wraparound relates to personal community. This philosophy works on the premises that family members know better than anyone what problems they have and how those problems need to be addressed. This approach also recognizes that families build their own interpersonal support networks which are just as important to treatment as the support of outsiders. The second level applies the term community in the more traditional sense. The community-based principle relies on services occurring in the least restrictive, most inclusive, and most

accessible place possible.[2] Juveniles are best served in the place where they are living rather than being treated at an independent facility and forced to re-integrate with the community upon release. The last level of community applies to service providers. This philosophy states that service providers, such as probation officers, counselors, and treatment programs cannot individually meet the needs of the youth. Instead they must work in a collaborative environment to set goals for the client and successfully meet those goals.

The principles of Wraparound are unable to be fulfilled within the current organization of The Maryland Department of Juvenile Services. The most pressing issue would be that of accessibility. The services that people need to start to improve their condition and build social capital are simply not located within their communities.

Currently the Maryland Department of Juvenile Services (DJS) is broken up into 5 geographical areas. With the exception of Area 1, which consists only of Baltimore City, each Area has a minimum of four counties. DJS offices are then established in each county with most having only one office. Most of these offices are centrally located within the county. While this is good in theory, in practice it fails. This central office proves inconvenient for both DJS employees and DJS clients who must travel great distances to provide and receive services. For example, a family who lives in Aqausco, which is in the southern most part of Prince George's County, would have to drive 25 miles in order to get to the nearest DJS office.

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[2] Walker, J.S., Burns, E.J., Adams, J., Miles, P., Osher, T.W., Rast, J., VanDenBerg, J.D. & National Wraparound Initiative Advisory Group, *Ten Principles of the Wraparound Process*. (Portland 2004) 8.

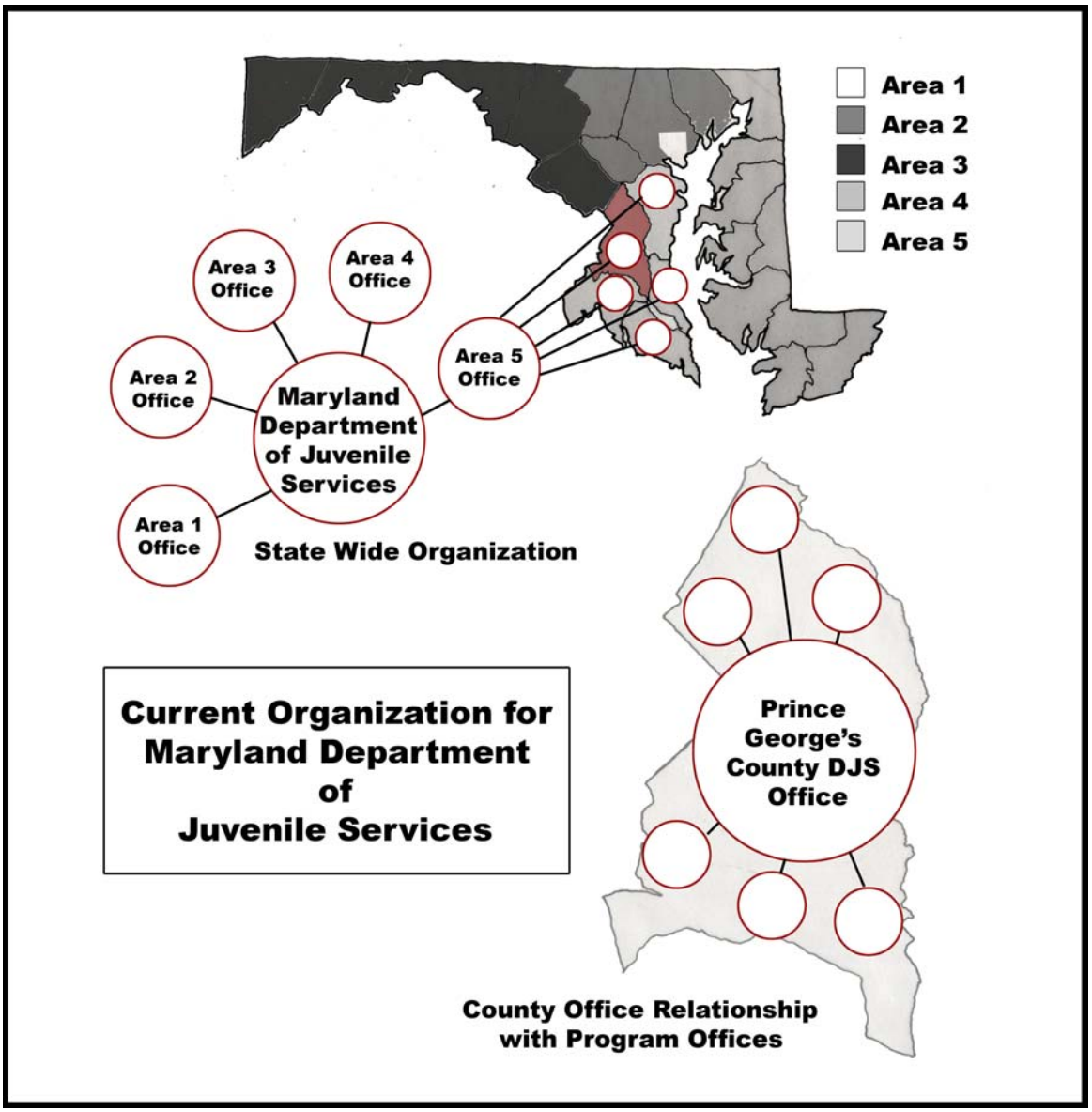


Figure 2: Existing Organization of Maryland Department of Juvenile Services
This represents the existing arrangement of the Prince George's County office for DJS. Because the office if centrally located, persons who reside in the northern and southern most portions of the county have to travel great distances to receive services.

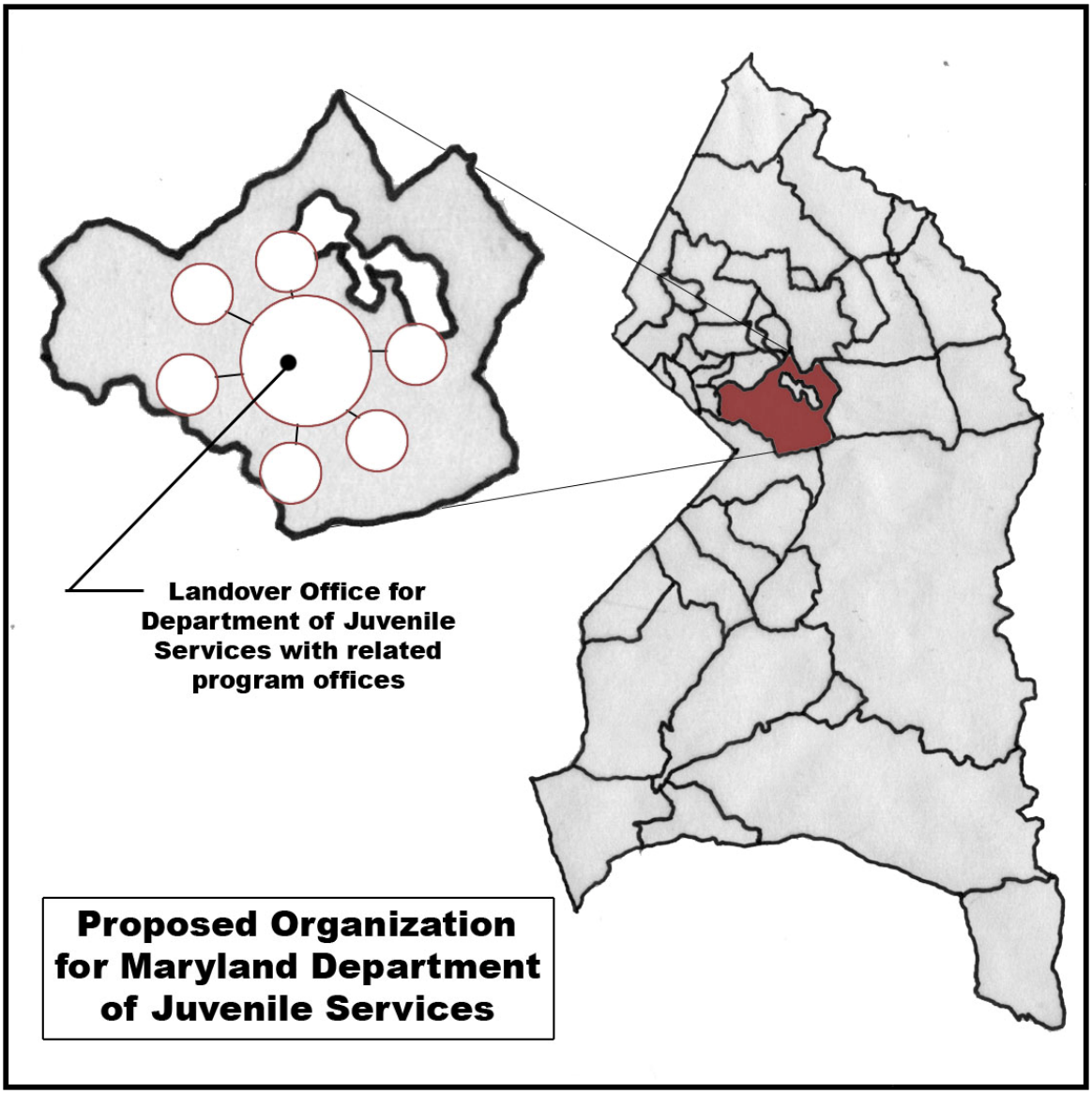


Figure 3: Proposed organization of Maryland Department of Juvenile Services
This proposes that the state organizes its system with area offices that exist within the counties, instead of state wide area offices made up of different counties. Under this system residents are in closer proximity to their service providers.

DJS often refers clients to other service programs as a part of treatment. These services are frequently privately operated and thus are established in office parks and medical facilities throughout the area. This arrangement increases accessibility issues as families are now forced to travel to more than one location to meet their needs.

Often times, problems with children are associated with problems in their family lives. Whether it is the result of parents not being home to supervise them because they need to work, or the existence of substance abuse problems, it stands that, unless removed from the environment, the issues faced by the child cannot be resolved without addressing the issues of their guardians. Since one of the stated goals of DJS is to provide treatment within the community, removal is not an option. Currently in Maryland, Social Services, which is geared towards the adults, and Juvenile Services are run by different agencies. While the division of function may be necessary to the effective delivery of services, the resulting lack of proximity is problematic.

By focusing on the community-based and collaborative principles of Wraparound the service delivery model can become more effective. A switch from a regionally based approach to a neighborhood approach allows more people easier access the services provided by DJS and DSS. The consolidation of DJS, DSS, and private services into one facility allows for the holistic care environment needed to truly be effective.

In making the services that allow the individual to grow more accessible, more people will be able to take advantage of those services; and by improving themselves, they will be better able to improve the community as a whole.

Urban Planning and the Building of Community

Urban design methods have undergone a metamorphosis through out time. Development has changed in form, moving from gridded growth patterns to the seemingly un-organized cul-de-sac driven development seen in the suburbs. Original settlements tended to have public greens while current day developments do not. A lot of

these changes in form are the result of improved transportation methods and zoning. The automobile has allowed people to move further and further away from the city center, while zoning has prevented the integration of uses that will allow a person to be within walking distance of shopping, work, or service.

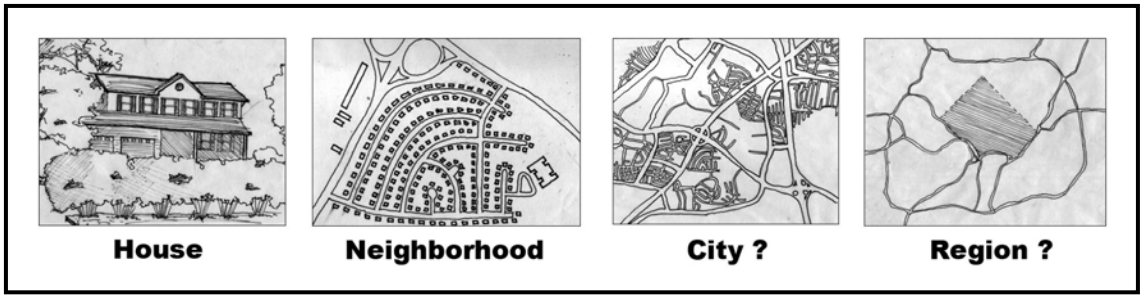


Figure 4: Urban Design Units
The base unit of the community is the house which in volume makes up the neighborhood. These neighborhoods then come together creating the larger unit of the city. The city is a smaller unit of the region. The prevailing problem with the suburban area is that this geographic community becomes isolated at its most basic unit. One generally goes directly from his/her homes, to his/her car, to the arterial road leading into the greater region. The people who live in these neighborhoods are not recognizing their position within a distinct community.

These trends in development have had a negative effect on quality of life and the environment. According to the 2005 U.S. Census Bureau's American Community Survey the average person spends 100 hours a year commuting. The resulting traffic congestion increases stress and the release of harmful pollutants into the air. As a further insult to the environment, more and more open space is being replaced by outlying residential developments and the network of roads needed to connect them back to the center.

There have been numerous attempts aimed at addressing these issues. Many of these, however, have been one sided, focusing only on the automobile or only on the environment. Many also strive to develop a new system all together, instead of working to improve the current situation. This thesis argues that the best way to improve the suburbs is through a comprehensive approach that addresses transportation, the

environment, and the disconnect from services, while acknowledging current growth patterns.

This philosophy is embodied in urban planning through the practice of "Transit Oriented Design". Peter Calthorpe emphasizes the use of the pedestrian pocket which is "a walkable, mixed-use neighborhood [that] reinforces transit, preserve open space, and make a more compact metropolitan form." [3] Essentially each suburb becomes its own miniature version of the city connected to the metropolitan area through both transit and arterial roads.

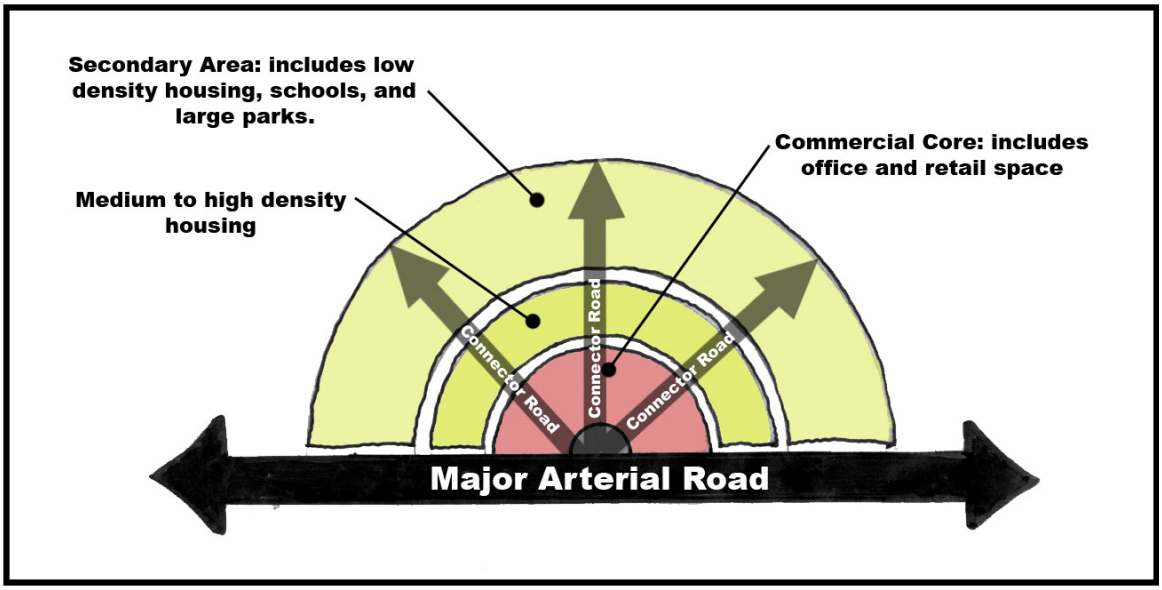


Figure 5: Pedestrian Pocket, adapted from P. Calthorpe's The Next American Metropolis, 1993
The Pedestrian Pocket is organized with transit and core commercial areas located along the main arterial road. Surrounding this core is medium to high density housing. Low density, single family housing, is placed at the perimeter in what Calthorpe refers to as secondary areas. These areas also include schools and large parks. The most important feature of Transit Oriented Design is the connection provided by the secondary street system.

This method starts to develop community in two ways. First by fully establishing each neighborhood as a distinct place within the region and second by allowing people

[3] Peter Calthorpe, The Next American Metropolis (New York: Princeton Architectural Press 1993) 45.

the opportunity to form connections with their neighbors as they walk places, ride the train, and shop together.

Architecture's Role in Community Development

The social service provider builds community by focusing on the individual, and the planner/urban designer builds community by organizing the physical environment. Architects produce tangible objects that elicit intangible responses from those who encounter them. In that respect, the architect is responsible for both the individual and the physical as they work within the context of the community.

In the physical environment the architect is quite simply responsible for the structures that make up the fabric. It is the use of established typologies that allow people to know what exists in their communities. Retail locations are built different from civic locations which are built different from housing. It is the use of typologies that allow a person to recognize a church without the presence of a sign out front denoting the same. This same use of typology, however, begins to restrain the movement of those within a community. One will generally go to a hospital or office building only if he/she has a purpose for doing so. Typology does not encourage the type of informal interaction needed in the building of social networks.

The architect deals with the individual by touching his/her emotions. Buildings can elicit feelings of something being permanent or fleeting. They can feel inviting or menacing. Perhaps what is most important to the idea of community is that buildings can evoke a feeling of pride or embarrassment. How a person feels about the fabric that makes up his/her community can directly influence how invested a person becomes in

that community. Let us say a person is given a choice of two shopping centers. One is within his/her community, has little architectural character, is poorly maintained, and demonstrates no thought about how the pedestrian will experience it. The other, located five minutes away in a different community, has a wealth of character, is well maintained, and was designed in a way that emphasizes the pedestrian experience. The shopper is more likely to choose the latter. What this means to the community is that they lose revenue generated from tax dollars and residents are less likely to establish the informal relationships necessary to build social capital.

Three Heads are Better than One

Just as all three disciplines have their strengths in their quest to define and influence community, they have flaws. The design process benefits most from these philosophies and methods when they are applied in conjunction with one another. The primary problem with the social service philosophy is that while it does a good job at improving the individual, the environment in which these services are offered is not conducive to the stated goals. Social Services can benefit from an architecture that combines the varying elements, Social Services and Juvenile Services, into one building designed in a manner that promotes collaboration. Social Services currently functions on a need to go basis. Besides the psychological barriers to people seeking un-prescribed help, the buildings that most of these services are located in are uninviting. The creation of an architectural form that invites people to come in and see what's going on may lead to the informal connection of people with services they need.

Social Services will benefit from the urban design philosophies in that the Pedestrian Pocket will bring the services to where the people are. The incorporation of transit into the Pedestrian Pocket makes the services available to a larger segment of the population. The location of the social services within the commercial core allows service providers to come from behind their desk and into the community, which also promotes informal connections and the exchanging of knowledge and information.

Urban design's greatest weakness is that it focuses its community building efforts solely on the built environment. In many ways the Pedestrian Pocket is a scientific formula that if applied correctly can solve all the ills of the suburban community. It is designed to fill practical human needs and fails to take into account the power of human emotion. What besides proximity brings people to the commercial core, and what keeps them there after they have finished their business? This is where the architect can help the planner, by creating a fabric that evokes positive emotions and associations, connecting the individual to the place where he/she lives.

The Wraparound Philosophy details the importance of social networks and the building of a personal community. If these needs start to influence the program of the Pedestrian Pocket so that it begins to include elements that promote casual interaction, it will be more effective in the end.

It is social philosophy's emphasis on the importance of formal and informal interaction and collaboration that can have the greatest influence on architecture. These concepts, when applied to the built form, can begin to make the architecture of the community better integrated into everyday life. As it applies to the aesthetic characteristics of the building, the architect can begin to understand how one can

experience and learn from what is happening within the building without having to formally enter the building. Applied to the building organization, one can see how the individual buildings that make up a place can be arranged in a way that makes them a unified experience instead of a series of episodes experienced only when one needs to.

Chapter 2: Site

The problem with planning is that it has been overtaken by mathematical models - traffic, density, impact assessment, public costs etc. discarding common sense and empirical observation.

~ Andres Duany

Regional growth patterns require regional governance.

~ Anthony Downs

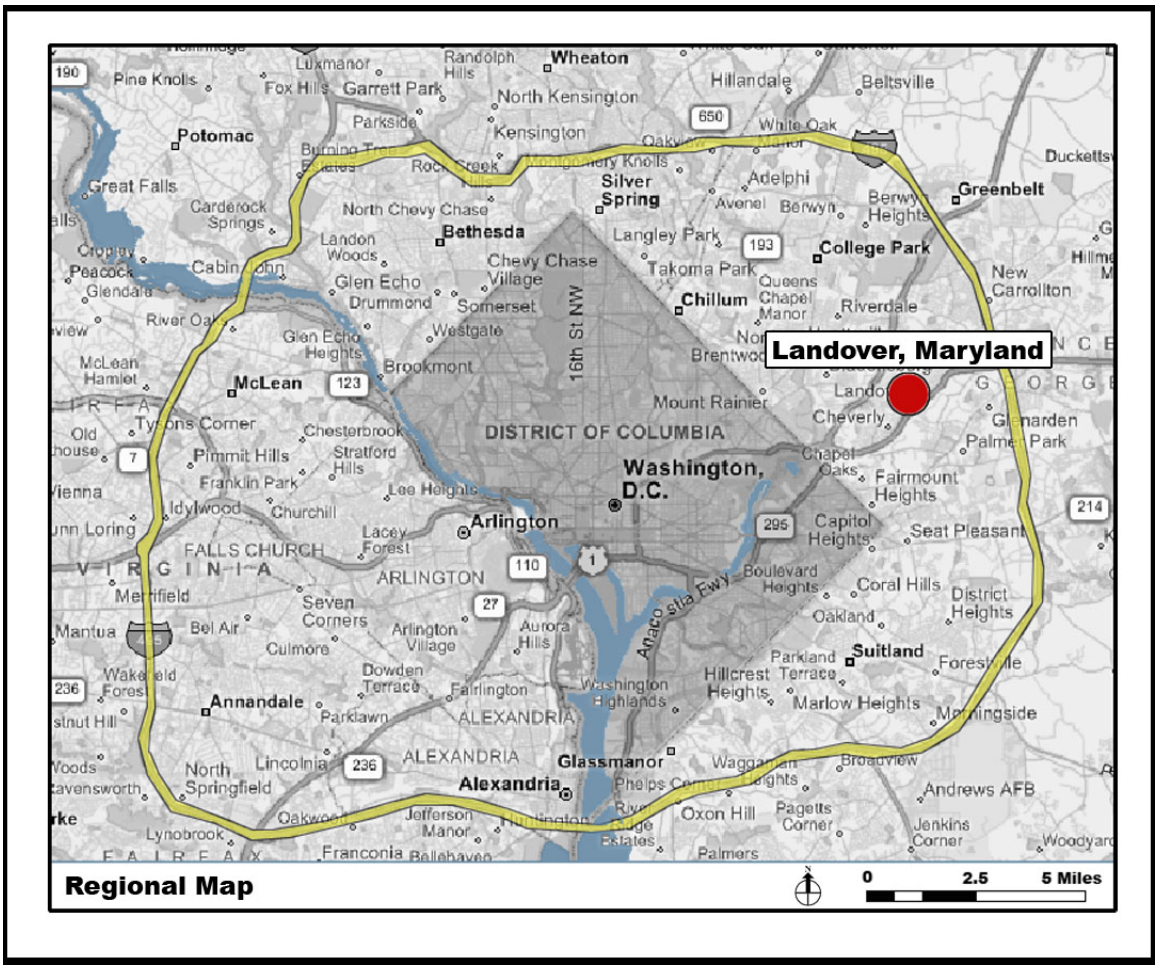


Figure 6: Regional Map
Landover is located to the north-east of Washington, DC and inside the Capital Beltway

Landover, located in Prince George's County Maryland, is the area of study for this thesis. This site was chosen because it is indicative of the broken character of suburban areas around the nation. Any effort made to improve the sense of physical and social connectivity within this area can be applied to other communities with similar conditions.

As an unincorporated area, the development of Landover was not the product of a comprehensive planning initiative. Instead, development was influenced by transportation and the growth within the surrounding areas. As a result, the area is made up of a series of housing sub-divisions with no coherent connections between them. Landover has no

community identity. The area itself is not well defined and is better known for being the home of FedEx Field and the headquarters for Giant Food, than a distinct place.

Despite all the development that is occurring in the surrounding areas, and the presence of FedEx Field, Landover has been stagnant. A lot of this stagnation is the result of a negative public perception of the area. Landover Hills, a near by community, has gone so far as to say on their website that "It is NOT adjacent to or in any way affiliated with the unincorporated area known as "Landover"". [4] With the opportunities present in the surrounding areas, and the perceived problems with Landover, there is no incentive for developing here.

Landover Mall was closed in 2002 due in part to issues with crime, and in part because people were traveling to other shopping centers to buy better quality goods. Currently there are no plans for the site. This mall, which was once thought of as a sign of prosperity and prominence within the region, is now seen as a symbol of all the things that are wrong within the area.

As Landover does not have an established governing body, it is the responsibility of the residents to organize and encourage the state to provide the support needed to improve and maintain the area. Before the residents of Landover can begin to act as a group, they must first recognize that they are in fact part of a distinct community. The process of brining the community together can begin with the application of the principles and practices outlined in the previous chapter.

[4] <http://www.lhills.sailorsite.net/>

Site History and Analysis

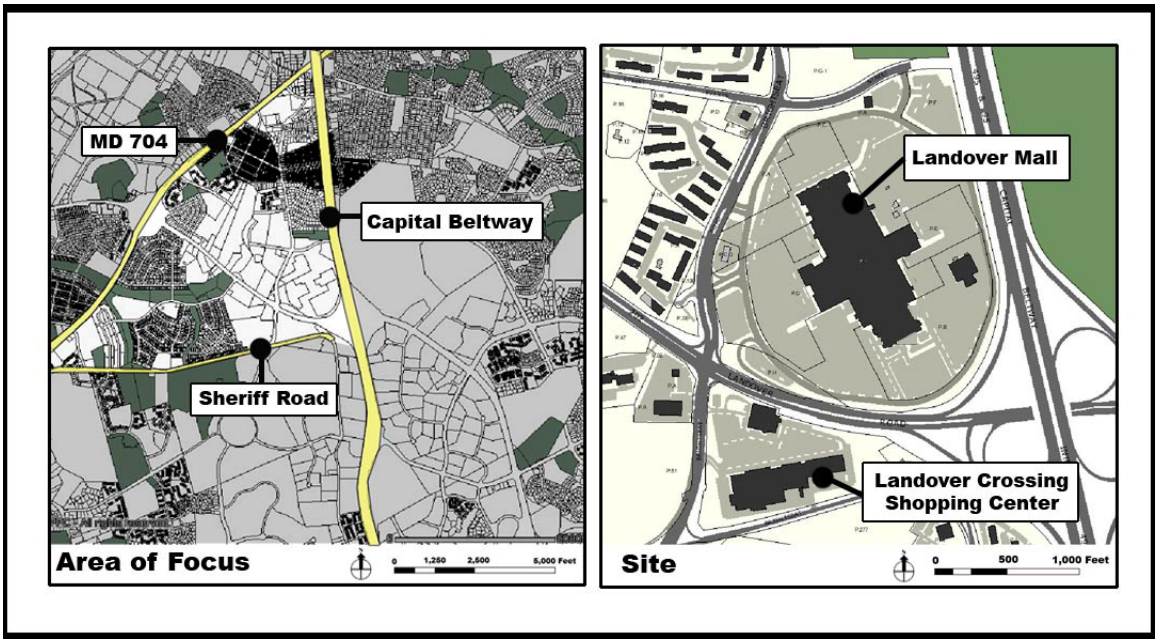


Figure 7: Site Definition Landover, Maryland

The focus of this thesis is on the area located to the west of the Capital Beltway (I-95/495), east of Martin Luther King, Jr. Highway (MD 704), and north Sheriff Road. Also included in the area of study is the parcel of land located to the east of I-95/495. The sites that are the primary focus of design are the former Landover Mall and the current Landover Crossing Shopping Center.

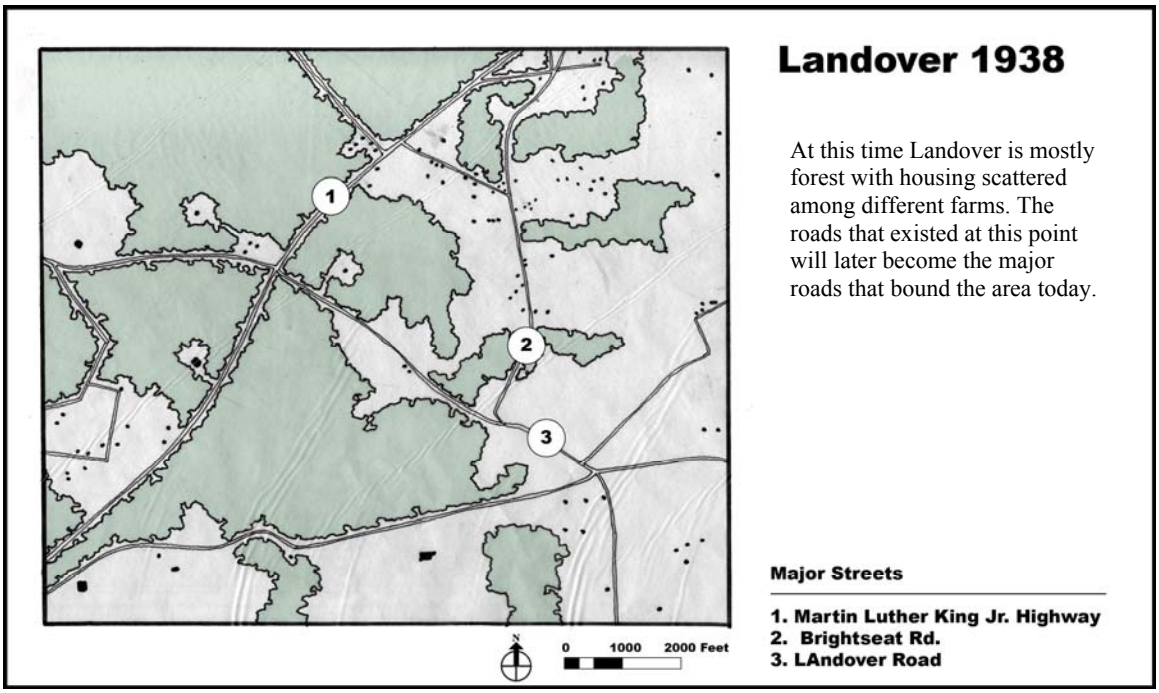


Figure 8: 1938 Site Plan Landover, Maryland

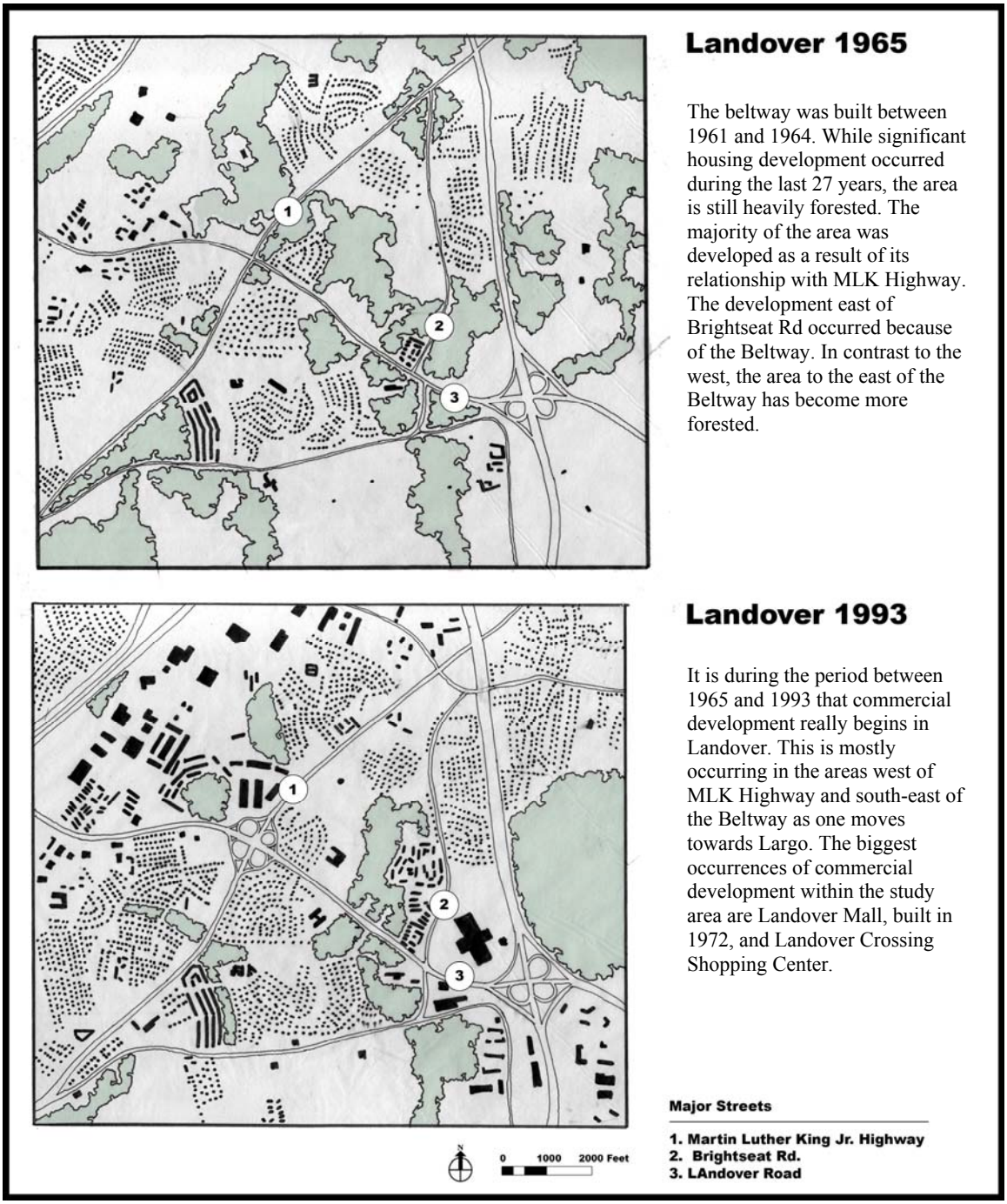
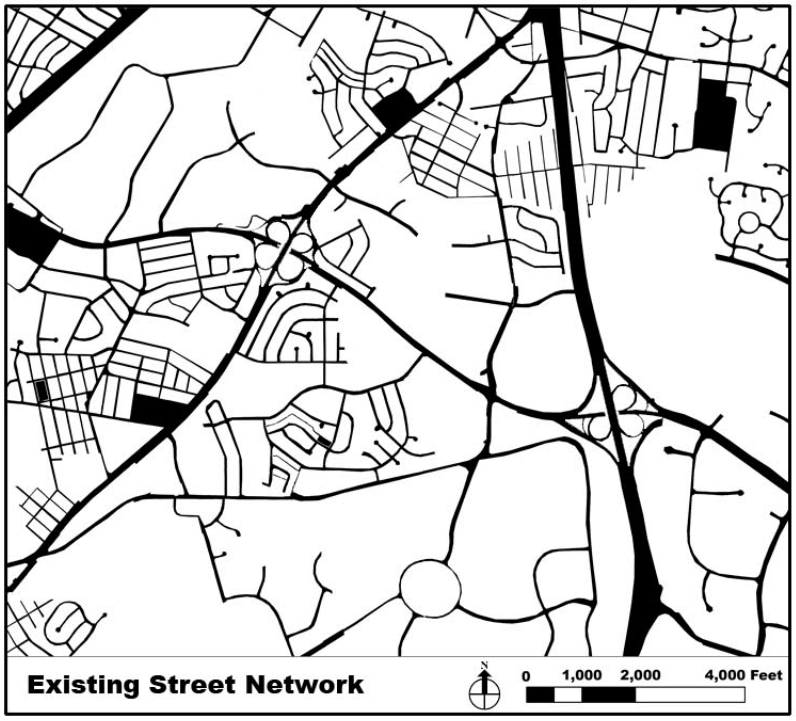


Figure 9: 1965 and 1993 Site Plan Landover, Maryland

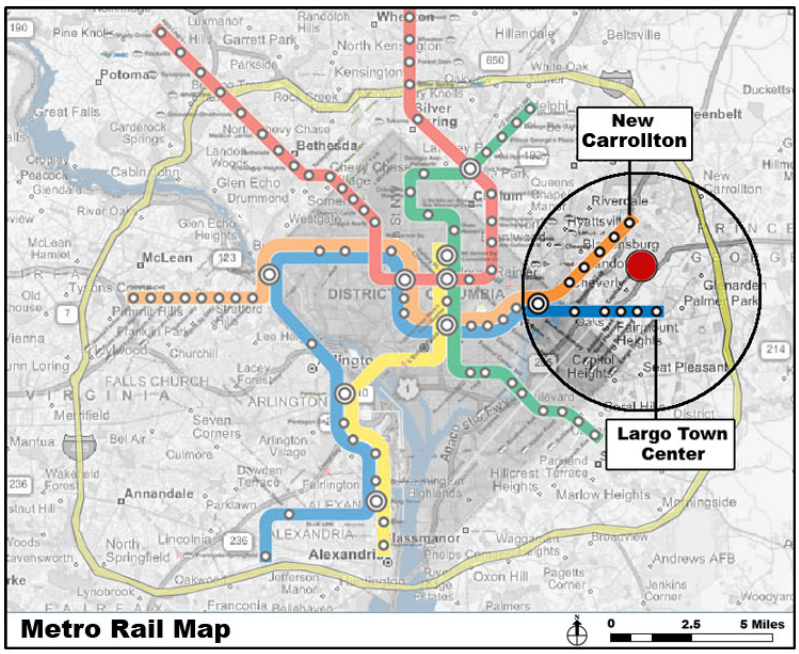
Landover 2006

The existing space positive diagram shows that the area is mostly housing, bounded by commercial, and other large uses, on the north-west and south-east. It also shows the disconnection between the different housing developments within Landover.



These disconnects are the result of the highways and primary roads that run throughout most of the area. These roads act as physical barriers between the communities. The street figure ground demonstrates a greater level of disconnect in that each of the existing housing developments has its own internalized street system characterized by feeder roads and cul-de-sacs.

Figure 10: Landover Existing Conditions

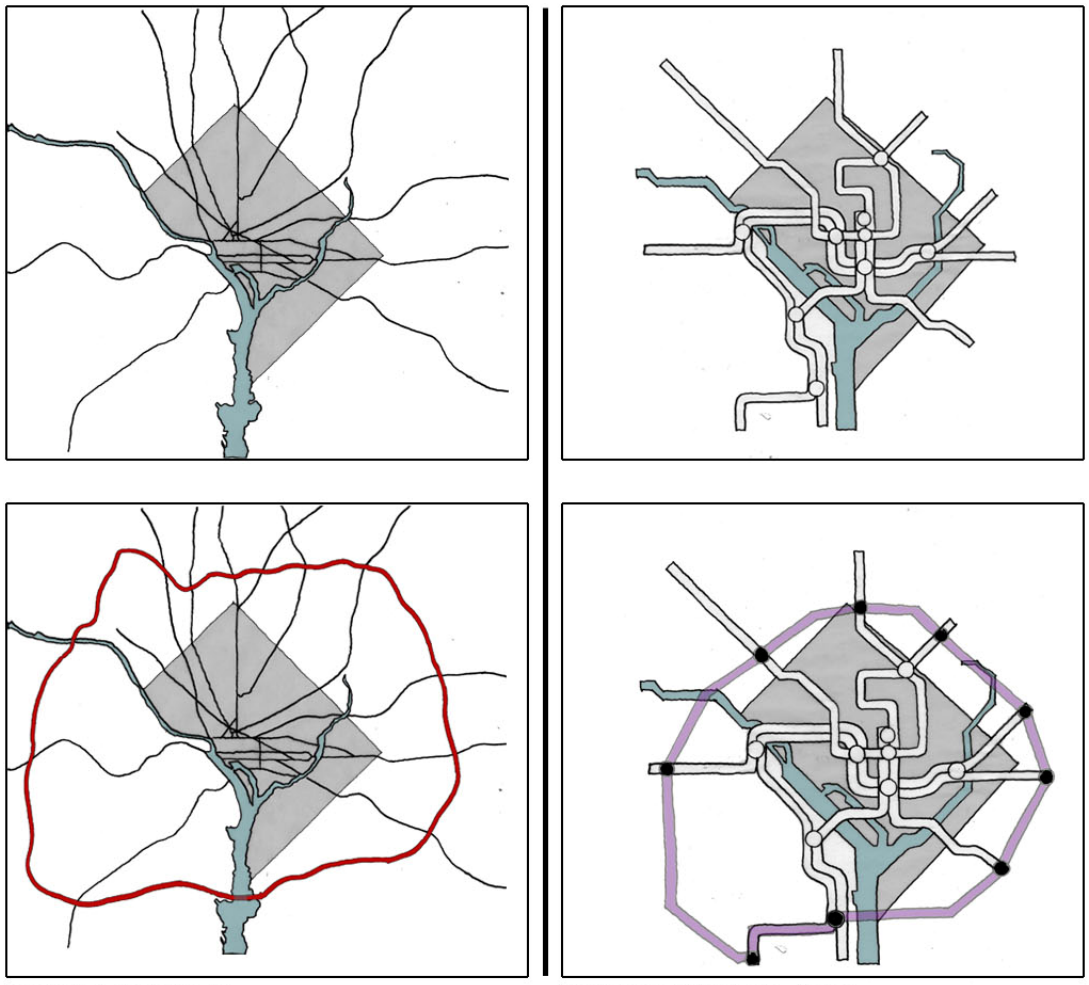


The area of study is located between two Metro stops. The first is the New Carrolton Station. This station is on the Orange Line and located approximately 2 miles north-west of the site. The second is the Largo Town Center Station. Largo is a terminus of the blue line and located approximately 2 miles south-east of the site.

The site area is served by Metro Bus. The A11 and A12 bus routes, which stops both on the mall site and on Brightseat Road runs between Capital Plaza Shopping Center and the Addison Road Metro station, stopping at Landover Metro Station along the way. The F14 bus route, which only stops on Brightseat Road, generates from the New Carrollton Metro Station and terminates at Naylor Rd Metro.

Figure 11: Public Transportation to the site Landover, Maryland

While it is possible for people who live outside the area to take public transportation to the site, there are not enough connections within the community.



DC's street system is radial, with all streets leading into and out of the core of the city. As people, services, and job began locating in the suburbs, the DC street system became obsolete. It became just as important to connect suburb to suburb as it was to connect back to the city. The solution to this problem was the Capital Beltway, a circuit that connects the DC suburban areas.

Unfortunately the planners for metro did not have to foresight to realize that a transit system that only radiates out from the city center would also become obsolete. The proposals for the purple line draw upon the precedent set by the beltway as a solution to this regional disconnect. The final form of the purple line has not been determined.

Currently if a Landover resident, who does not have a car, wants to travel from New Carrolton to Largo he/she either has to wait for the bus or take the metro into DC, then back into the suburbs. A four mile trip just got significantly longer. If the Purple Line included a stop in Landover local connectivity would be greatly improved.

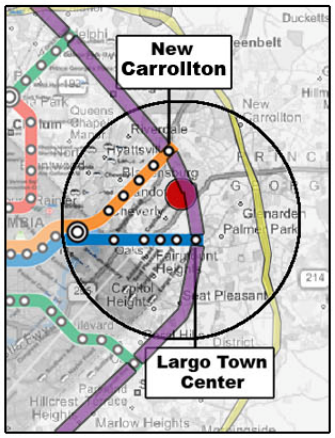
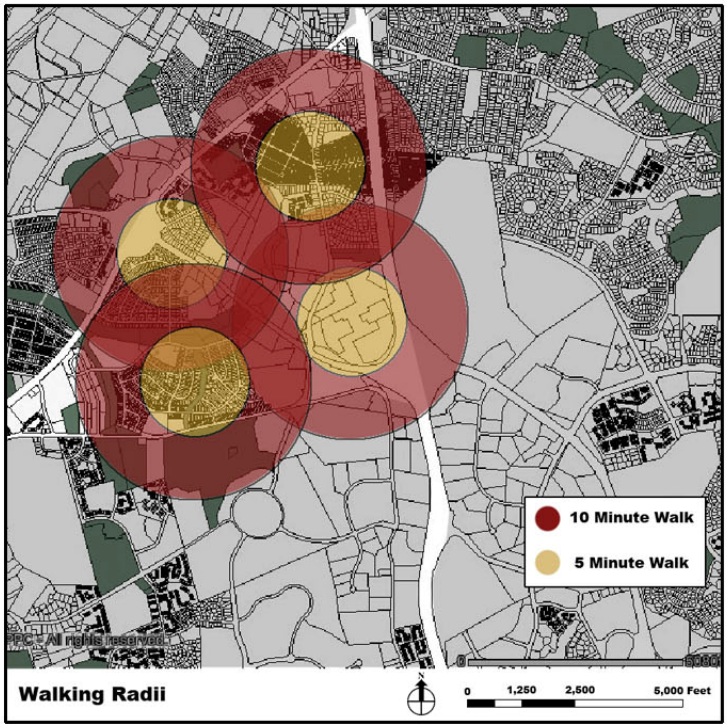
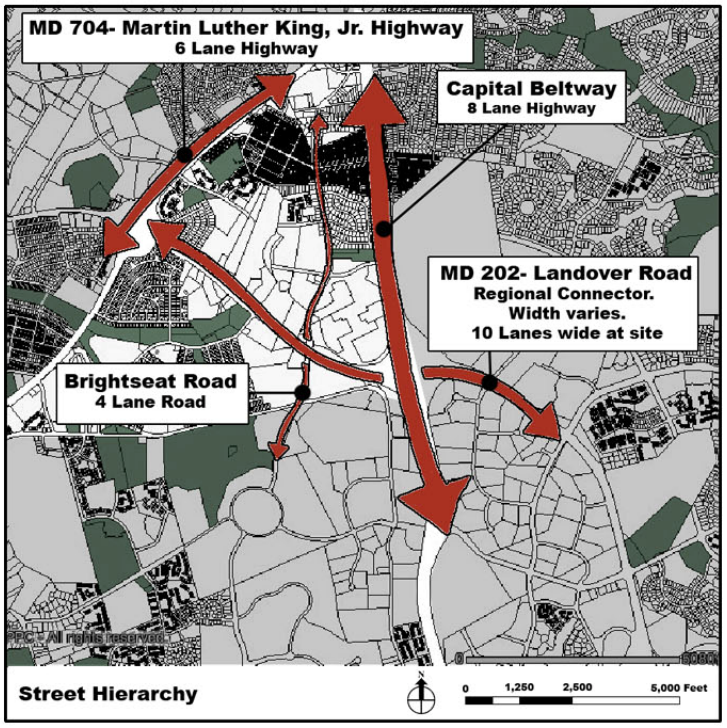


Figure 12: Beltway/Purple Line Comparison
Public transportation in this region has developed along the same lines as the road system, and the introduction of the beltway will serve as the precedent to the solution of public transportations disconnect.



The five minute walk is defined by the quarter mile radius. While each of these neighborhoods is walkable as an independent entity, one can not easily walk from one neighborhood to the next



The Capital Beltway and Martin Luther King Jr. Highway are two major north-south regional connectors. Landover Rd (MD 202), which bisects the site, is a major arterial road providing east-west connection within the area. Landover Rd terminates in Upper Marlboro, Maryland at one end, and merges with Annapolis Rd (Rt. 450) at the other. At its intersection with Brightseat Road, Landover Road is 10 lanes in width. All three of these roads are high density and high speed, making them significant barriers to pedestrians. Brightseat Road, which bisects the site in the north-south direction, while not as heavily traveled, still serves as a barrier to pedestrian travel across the site.

Figure 13: Neighborhood Walkability

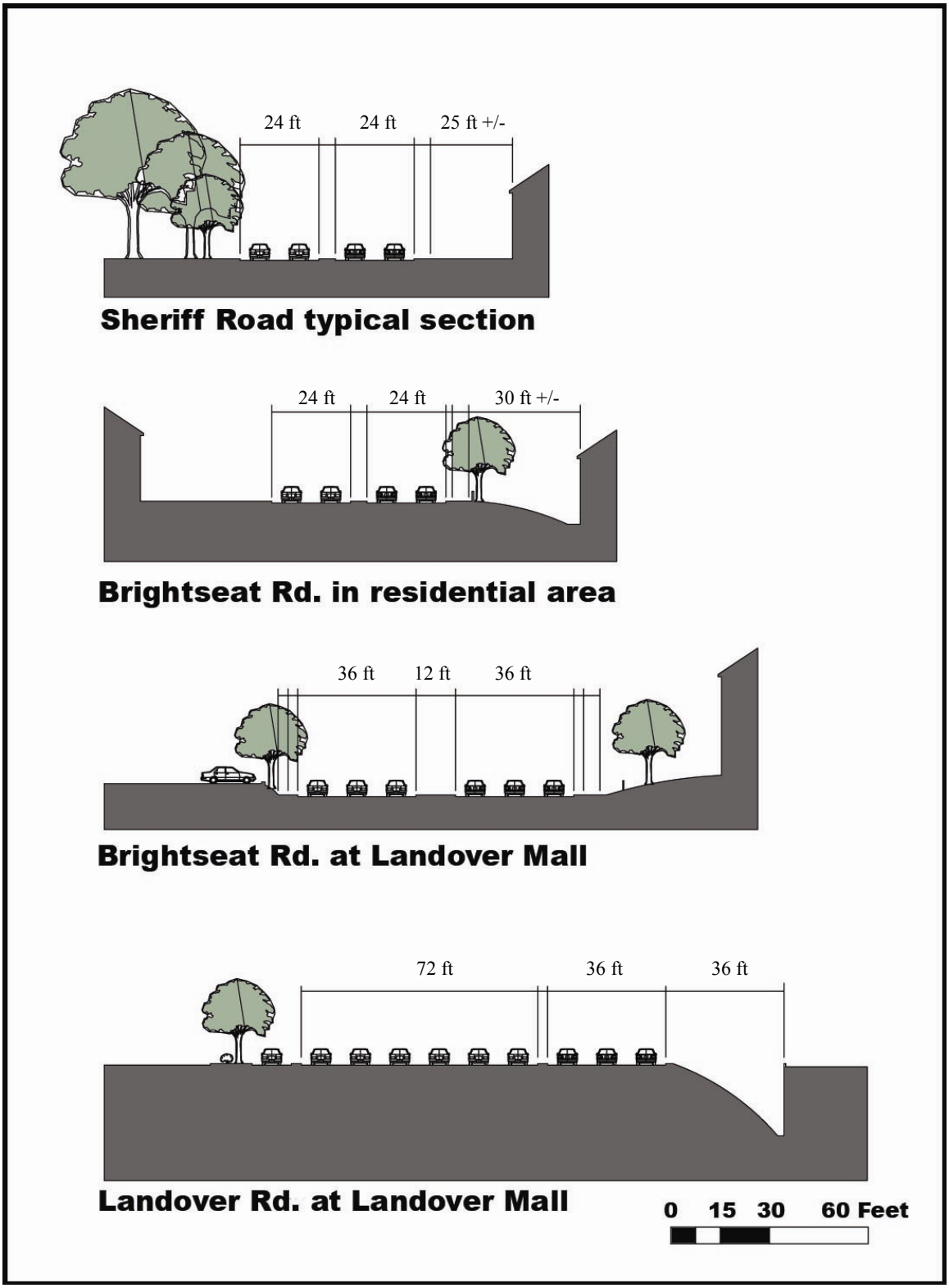


Figure 14: Existing Street Sections Landover, Maryland

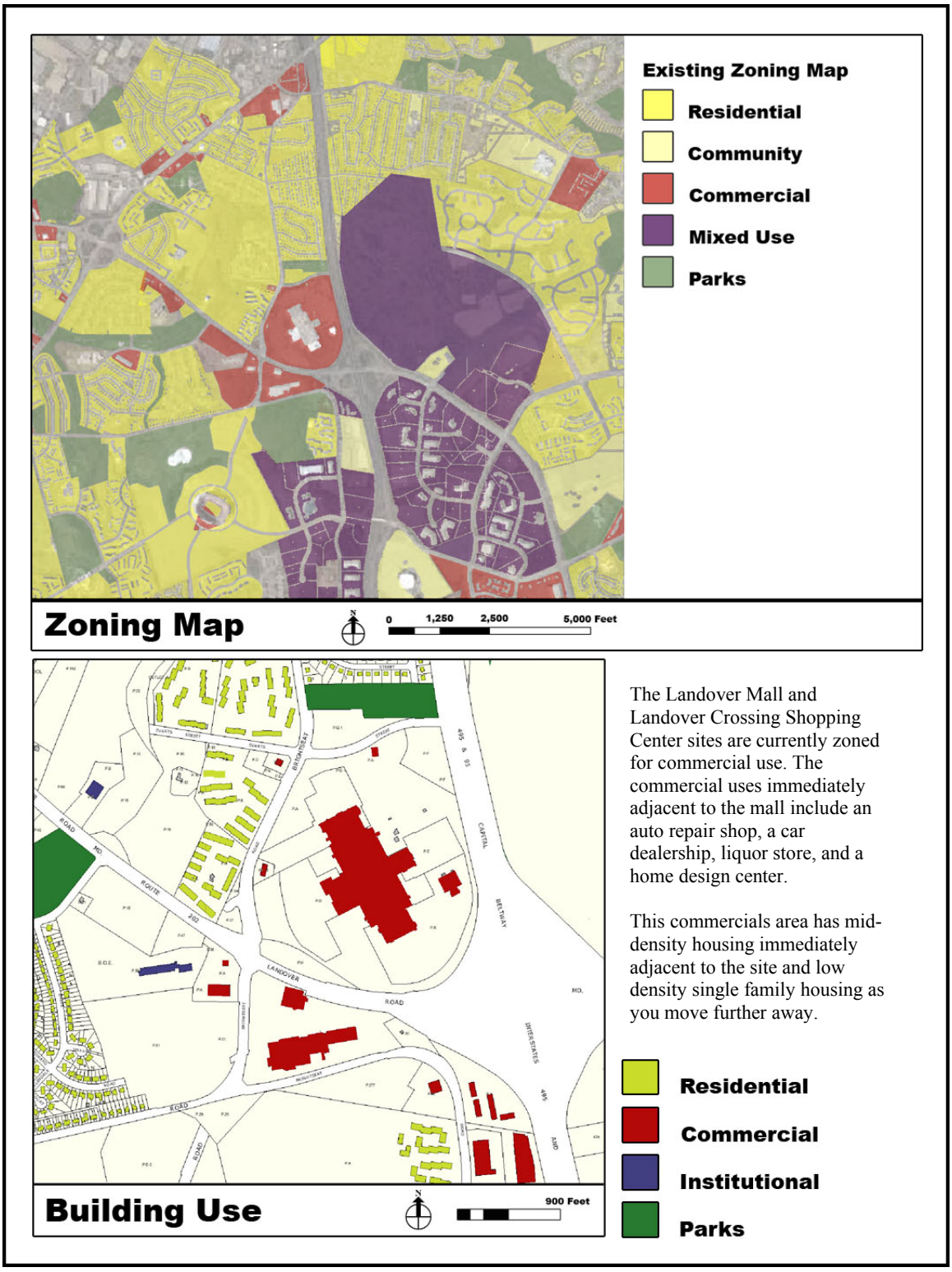
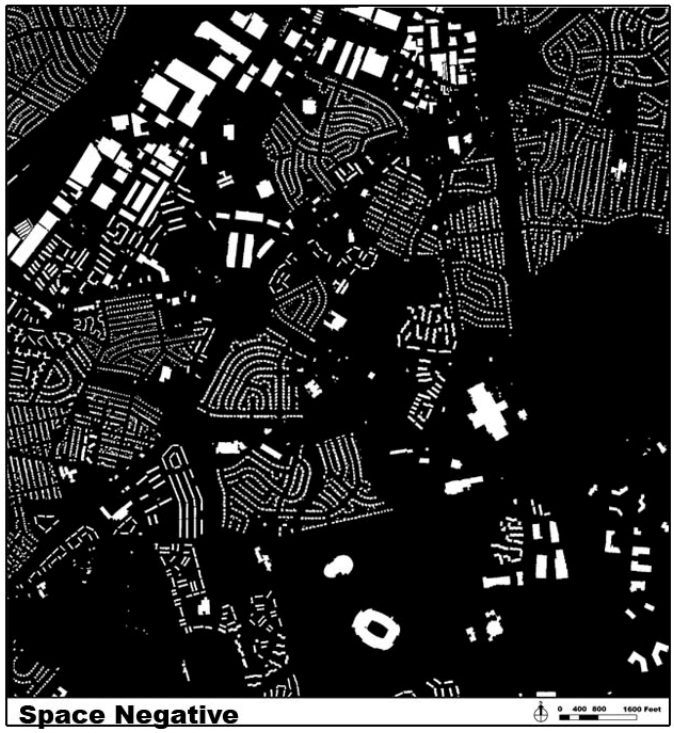


Figure 15: Existing Zoning and Building Use Landover, Maryland



What does all the open space represent?

1. Interchange Capital Beltway and MLK Highway
2. Interchange Landover Road and MLK Highway
3. Park
4. Parking around Landover Mall
5. Interchange Landover Road and Capital Beltway
6. Forested area
7. Forested area
8. Parking around Fed Ex Field and PG Sports and Learning Complex

Figure 16: Space positive and Negative Landover, Maryland
The fabric of Landover is broken by many open spaces, the majority of which is undeveloped forested land or devoted to the automobile.

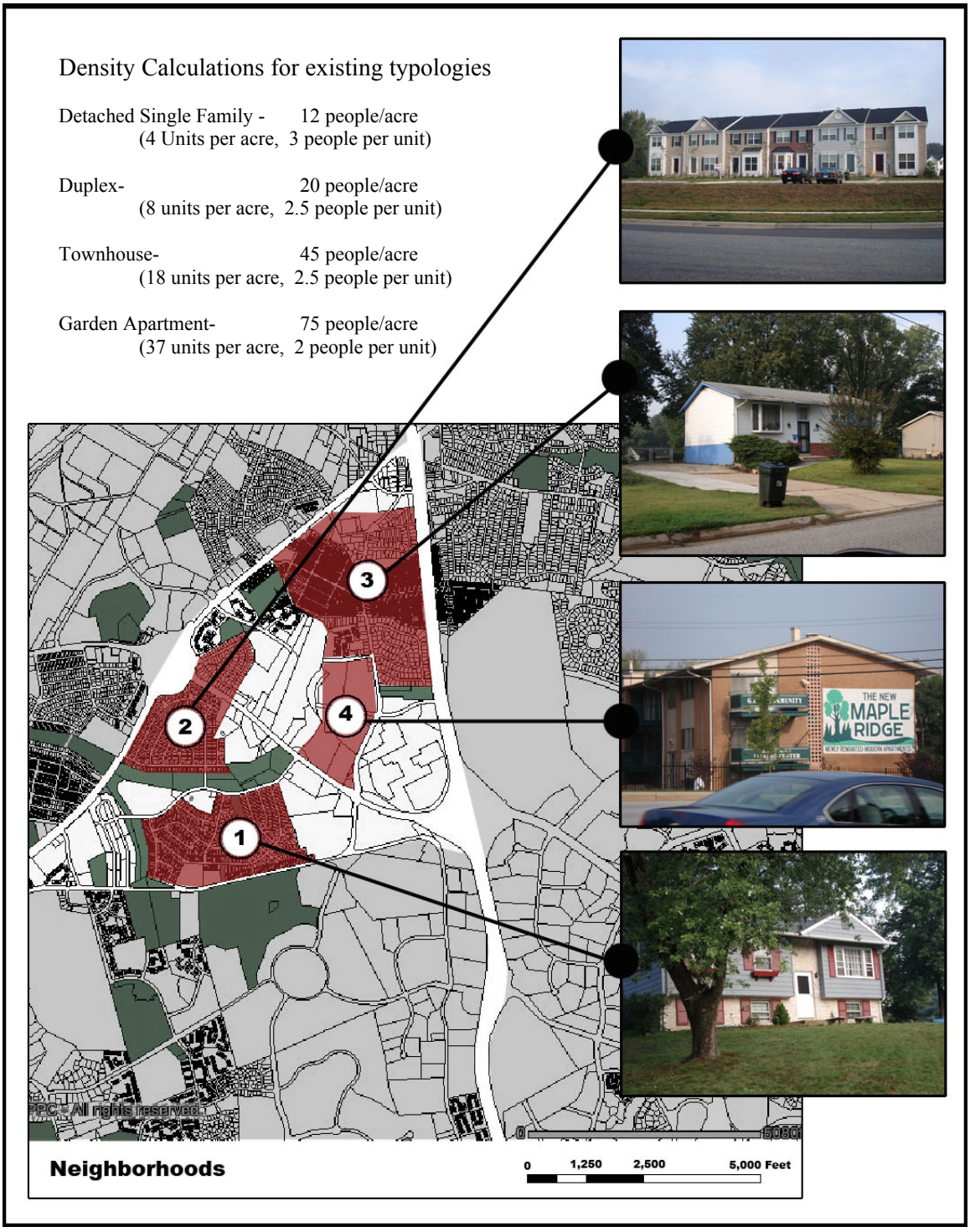
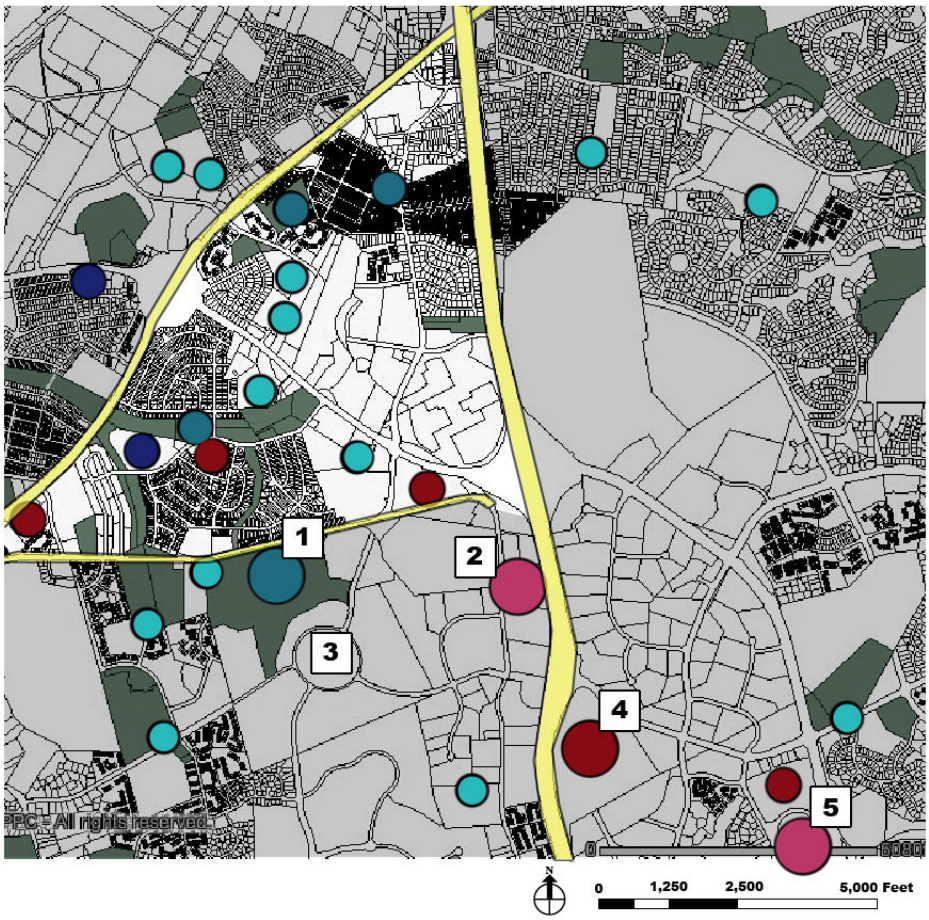


Figure 17: Neighborhood Make-up Landover, Maryland
The area of study mainly consists of single family detached homes, town homes, and garden style apartments. These housing types are grouped into four neighborhoods, each existing within an area roughly defined by a ¼ mile radius. Single family homes are concentrated into three of neighborhoods. The fourth neighborhood, located along Brightseat Road closest to the mall site, is made up of the apartment buildings.

Important Locations

1. **Prince George's Sports and Learning Complex**
2. **Current office for Maryland Department of Social Services**
3. **FedEX Field**
4. **Boulevard at the Capital Center**
5. **Current office for Maryland Department of Juvenile Services**



Schools
Recreation Center/ Library
Police/ Fire Station
Social Service Offices
Shopping Centers

Figure 18: Local Services and Amenities Landover, Maryland
While services such as libraries and recreation centers already exist within the study area, they are not easily accessible to all residents. In the case of the Sports and Learning Complex, residents do not feel comfortable using the provided facilities.

Figure 19: Amenities Building Character Landover, Maryland
The existing architecture of the community buildings in Landover is imposing and closed off. Without the presence of the signs out front residents have no clue, visually or otherwise, as to what is occurring within these buildings.

Regional Draws

K. Crenshaw 2006

FedEx Field
There are two existing sites that tend to draw people who do not live or work in Landover to the area. The first is FedEx Field, home of the Washington Redskins. While the stadium is only used about 12 times a year, it has a major impact on the area, specifically during game days as it drastically increases the amount of automobile traffic in the area. Despite its proximity to two metro stations, most people drive to the area then take shuttle services from the various parking lots to the stadium.

Gilbert, Alan
www.tilt-up.org/awards/2005/boulevard.htm
19 December 2006

Boulevard at the Capital Center
The other site is the Boulevard at the Capitol Center, located on the site of the former US Air Arena. The shopping center is an open air mall located right off the Largo Metro Station. Among its tenants are a variety of retail stores including Bed, Bath and Beyond, Borders Books, and Anne Taylor. Restaurants within in the shopping center include Kobe Steak House, Stonefish Grill, and Red Star Tavern. There is also a Magic Johnson Theatre located within the mall.

http://www.petrieventures.com/port-woodmore.html
19 December 2006

Woodmore Towne Center
Coming soon to the area is the Woodmore Town Centre which will be located in the forested portion of land directly to the east of I-95/495 and north of MD 202. The Town Centre, which is expected to break ground in 2007, is to include "700,000 SF of retail, 922 residential units, two hotels/conference center and one million square feet of office space".

Figure 20: Regional Locations Landover, Maryland

While these locations work to bring people to the area, they will serve as competition for any commercial development that is proposed as part of the Community Center. The proximity of Woodmore Town Center is especially troublesome.[5] For that reason they should be considered when making decisions about scale and program.

[5] The Prince George's County Government. Office of the County Executive. (May 4, 2006) Jack Johnson Announces Wegmans Food Market is Coming to Prince George's County. Retrieved November 14, 2006) <http://www.co.pg.md.us/Newsroom/PressReleases>

Report from the Urban Land Institute:

On January 17th and 18th, 2006 the Urban Land Institute (ULI), by request of the Maryland National Capitol Parks and Planning Commission, convened a 1 ½ day conference to discuss land use and real estate issues at the Landover site and propose options for redevelopment plans. The panel was asked to look at the Landover Mall site in terms of becoming a Community Center for the Greater Landover area. The Community Center use was first specified in the 2002 Approved General Plan for Prince George's County. A Community Center is defined as a "concentration of activities, services, and land uses that serve the immediate community" [6] and generally includes public facilities and services and integrated commercial, retail, and residential development. As part of their study ULI was asked to address a number of specific issues including: [7]

- Crime and a general negative perception of the community
- Lack of connectivity within the center and to nearby sites
- Improvement of pedestrian safety
- Effects of proposed development in the area on the redevelopment potential for the Landover Mall area

ULI met with community leaders and learned the following things about what residents of Landover wanted to see done: [8]

- Residents wanted to make sure that the primary use assigned to the site would act as the catalyst for sufficient economic development in the area.
- Community members are against high-density residential development of the site as they fear it will put a strain on existing infrastructure

[6] Urban Land Institute Washington District Council (January 17-18, 2006) A Technical Assistance Panel Report: Redevelopment of Landover Mall and Vicinity, 10

[7] Urban Land Institute, 7

[8] Urban Land Institute, 9-10

- What community members sought is high-end retail, an education facility, higher quality jobs, office space, and some other use that would benefit the local citizens
- They also requested recreational facilities of a smaller scale and more affordable than the Prince George's Sports and Learning Complex located nearby

In the end ULI proposed three development scenarios for the Landover Mall site. The first, proposes a Mixed-Use Urban Village, designed as a main street and combining retail, commercial, residential, and civic spaces. The second scenario suggests that the community focus on attracting a large institution or organization to the area, such as a Government Agency or a University. The idea is that these uses will attract other types of development to the area, such as commercial and residential. The last scenario suggest that the community place a temporary use on the site that will draw people to the region, such as an auto mall, until Landover regains its stature in the regional economy at which time it can be redeveloped.

The ULI also made three recommendations that directly addressed issues of connectivity and pedestrian safety. First they proposed a bridge meant to connect Evart Street on the west side of I-495 to the future Woodmore Town Centre on the east. The panel also recommends the establishment of a circulator bus to connect the Landover Community Center with the Largo and Landover Metro Stations as well as other destinations. The last recommendation is for the assessment and redesign of existing street sections to allow for easy pedestrian crossing and the possible inclusion of bike lanes and dedicated bus lanes.

Site Design Opportunities and Constraints

This thesis accepts the ULI's first recommendation for the Mixed-Use Urban Village as the best use for the Landover Mall Site. This thesis also accepts the recommendations to increase connectivity including the introduction of a circulator bus route, the Evarts Street Bridge, and the need to address the existing street section, especially along Landover Road. Beyond pedestrian centered improvements, this thesis looks at ways to improve automobile flow between the neighborhoods and ways to encourage the use of alternative forms of transportation such as bikes

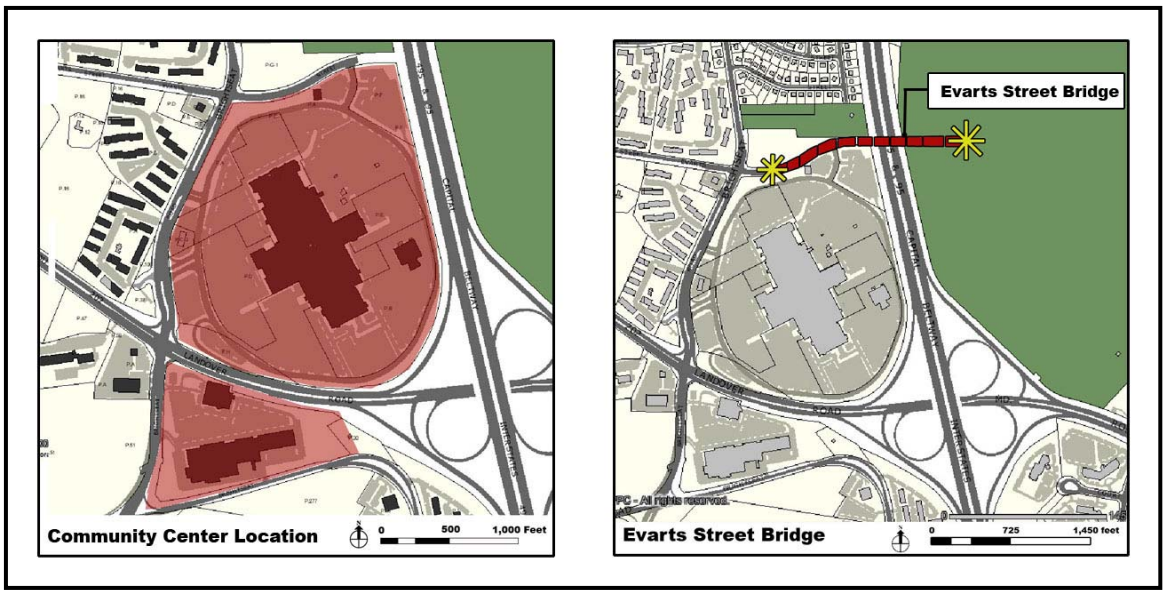


Figure 21: ULI Recommendations for Landover, Maryland and mall site

This thesis does not accept the current development plan for the Woodmore Town Centre. The current plan presents a number of issues that are not beneficial for the community or the environment and, in some cases, makes worse problems that already exist in the area. The first issue with this plan is that its program implies that it is more about serving people who will be traveling to this location instead of those who currently live in the vicinity. Considering the lack of a transit station, one would conclude that the

majority of traveling will be done by automobile. This will increase congestion on a stretch of road that is already over taxed with traffic. This influx of cars generates a need for a significant amount of parking, which appears to make up about half of the site footprint. This is particularly troublesome in that an area that is currently natural environment will be replaced almost completely with impervious surfaces. While the area may be able to support the proposed commercial and retail uses within the Centre, it will do nothing to help support or enhance the business that are struggling to survive within the community and may in fact be the deciding factor that causes the rest of those businesses to fail. Finally the Woodmore Towne Centre does not provide any of the services and amenities that this community needs in order to start to build social capitol among its members. Instead, this thesis proposes that that parcel of land should maintain a large share of its wooded area and the rest should be developed into neighborhoods, with their own centers, and connected to the larger community center.

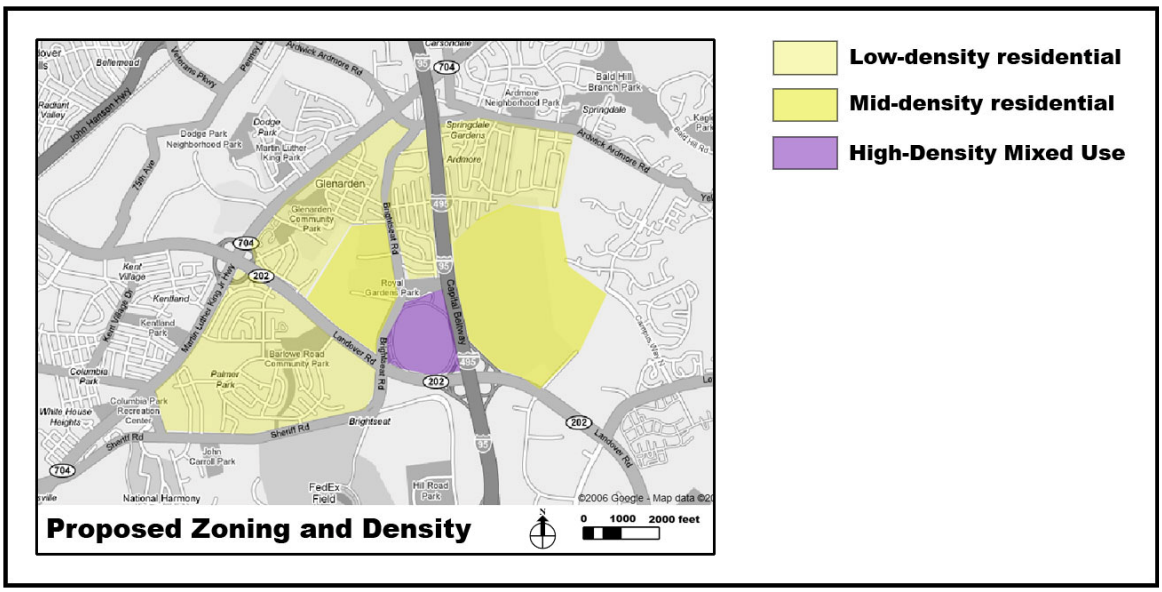
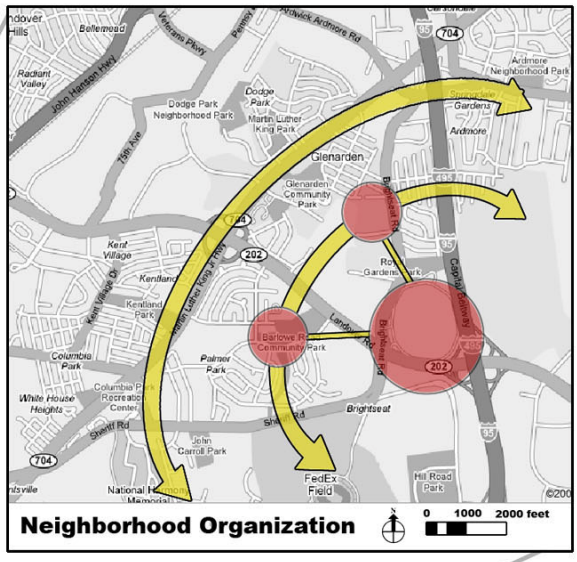
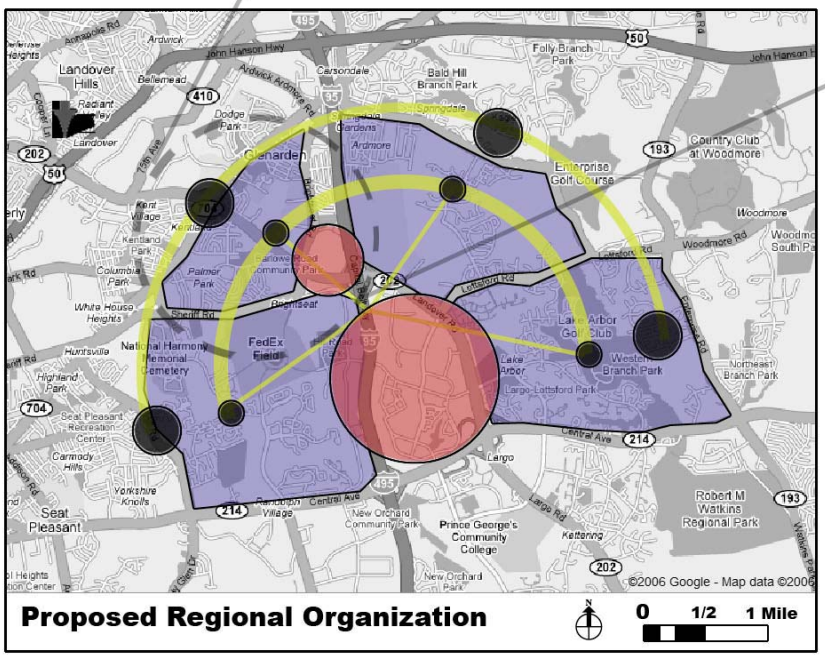


Figure 22: Proposed Zoning and Density
This thesis recognizes that the existing population in Landover can not, on its own, support large scale retail developments and thus recommends that residential density be increased in the areas immediately adjacent to the Community Center.

BELOW:

The large red circle represents the existing commercial core within the area. This core consists mostly of speculative office buildings. The small red circle represents the new community center, while the blue areas represent existing neighborhood groupings. These areas are connected by the highways that run along the edge. This thesis recommends that an internal connector between the neighborhood groupings be established and that each group should be connected to the commercial and community centers.





ABOVE:

Within each of the neighborhood groupings there should be a small scale center to serve residents immediate needs. These centers will then act as the terminus of the connector that takes you to the larger community center.

Figure 23: Regional and Neighborhood Organization
The disconnected nature of the neighborhoods suggests that the community center can not, and should not, be the sole source of retail and social opportunities for this area. Instead, small scale centers should be created, or enhanced, to support each neighborhood group. Each neighborhood center, in turn, should be connected to the area center.

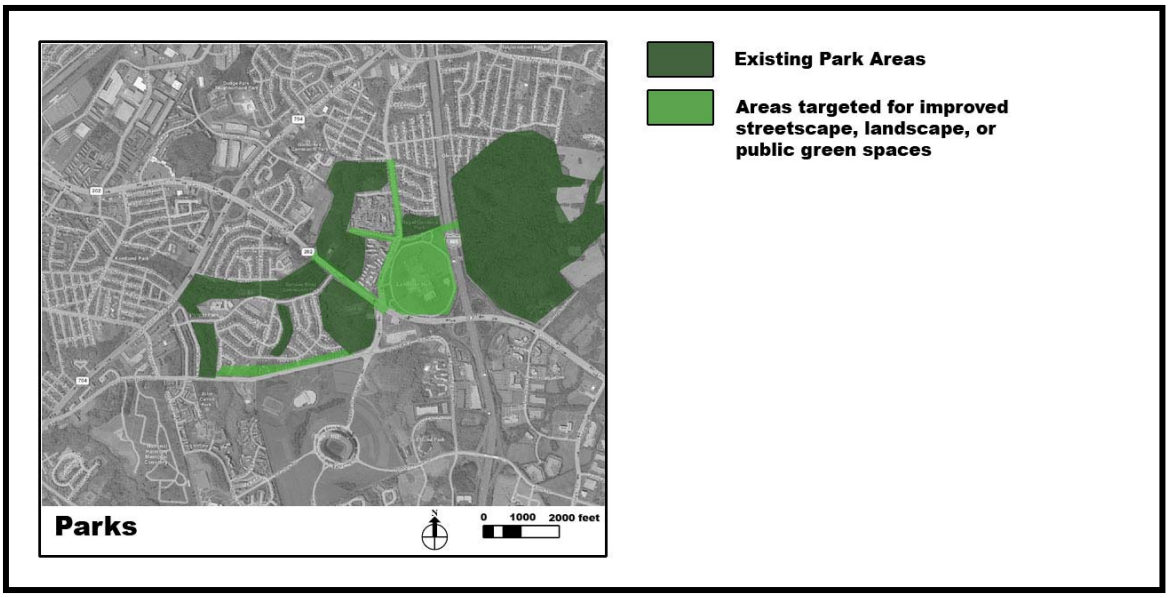
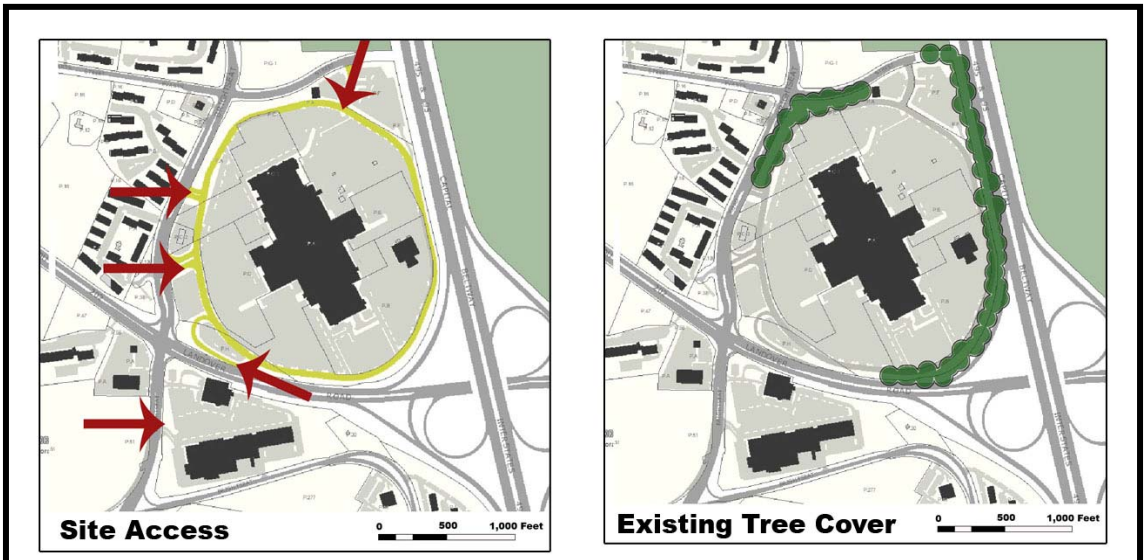


Figure 24: Park System Landover, Maryland
Landover has a large amount of area that has been left in its natural state. This thesis wishes to respect that, but also plans to better integrate that natural landscape into the lives of the residents of Landover.

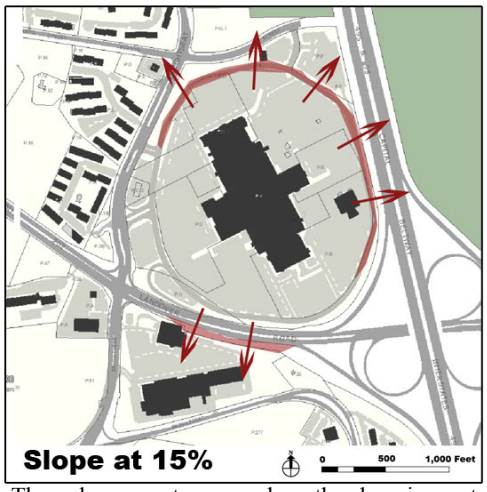
The mall and shopping center sites are where the new community buildings are to be located. Each of these sites has its own set of opportunities and restrictions as they relate to the placement of the new buildings.



With the exception of the entrance right off the Beltway ramp, most entrances are arrived at from Brightseat Rd.

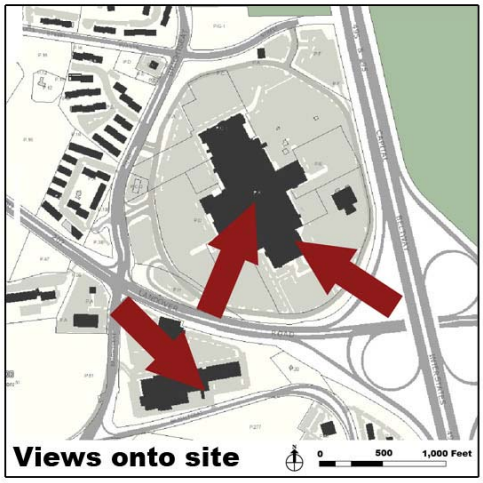
Trees act as a border to about half of the site. These trees should be maintained as a noise barrier.

Figure 25: Site Access and Edge

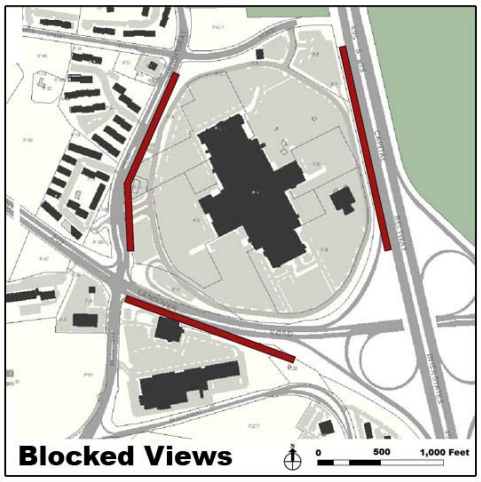


The red represents areas where the slope is greater than 15%.

The mall site generally slopes us towards the north. The shopping center site has fairly flat grading.



The mall site is best seen from the ramp leading from the Beltway and from Landover Rd. The shopping center is best viewed when driving east on Landover Rd.



Because of its sunken elevation, you cannot see the mall from the Beltway. The shopping center's lower elevation prevents you from seeing it while on Landover Rd. Distance and landscaping serve as a visual barrier between the mall and apartments.

Figure 26: Site Slopes and Views

The previously outlined conditions suggest that the best location for the community center in terms of being viewed will be on the mall site closest to Landover Rd. The housing that would be included as part of the overall development plan would be better situated in the north-eastern part of the mall site where it can benefit from the natural noise barrier provided by the existing trees.

Chapter 3: Program

Recognizing the need is the primary condition for design.

~ Charles Eames

Defining the Needs

The determination of a Community Center Program can not be an isolated endeavor. The program needs to address both the needs of the individual residents as well as provide the elements needed to allow Landover to exist as an independent community. To accomplish this, the program was looked at in three ways, starting by listing the program requirements of the Pedestrian Pocket. The program was then determined based on the recommendations of the Urban Land Institute, who made their decisions based on development possibilities and community wishes. Finally, to address individual needs, the program was addressed based on the Wraparound Philosophy.

Pedestrian Pocket Program as given during 1988 Design Charette	**ULI Report** Based on Development opportunities and community wishes	**Wraparound** Program as defined by Wraparound focuses on meeting the needs of the individual residents	**Applied to thesis**
Light Rail Station			Yes
	Circuit Bus Route		Yes
Office Space (for corporate entities and smaller tenants)	Office Space	Office Space (specifically to accommodate the Department of Juvenile Services, the Department of Social Services, and supporting program offices)	Yes (to accommodate DJS and DSS and medium to small businesses)
Retail Facilities (restaurants and stores)	Retail Facilities (residents especially interested in high-end retail options)		Yes
Commercial Parking			Yes
Housing (low, mid, and high-density options)	Housing (low to mid-density)		Yes (mid to high-density options)
Elderly Housing Facilities			Yes
Day-care Facilities		Day-care Facilities	Yes
Civic Facilities (including police stations, fire house, and town hall type building)	Civic Facilities		Yes
Parks and Recreation Facilities	Recreation Facilities		Yes
	Educational Facilities	Educational Facilities	Yes
		Cultural Facilities	Yes

Figure 27: Comparative Program Requirements

Site limitations

Since most of the housing stock in the area is made up of single family homes the site does not have enough density to support a large scale center. This suggests that any new housing should significantly increase the density in the area immediately adjacent to the site. The bisecting of the site by major arterial roads and the isolated nature of each neighborhood necessitate transit to provide connection on two levels. The first is to connect the residents to the community center; the second is to connect the city of Landover to the greater region. The Urban Land Institute already suggested a circulator bus route for the area. This thesis expands upon that with the recommendation of either a metro or light rail transit stop at the community center.

As Landover is so close to the Boulevard at the Capital Center and the Largo Office Park area, it is important to keep any retail and commercial spaces at a scale appropriate to the immediate community's population size and its ability to sustain those uses. The goal of commercial and retail spaces in this community is not to attract uses that compete with those at the Boulevard or the office park. Instead the goal is to provide space for businesses that are able to serve the unique character and needs of the people who live in Landover.

Proximity to schools combined with 50% of households having children under the age of 18 suggests that entertainment and recreational elements should be geared towards youth as much as adults.

Community Center Program

The previous analysis leads to the development of a site program and an architectural program for the Community Center. The site program includes retail/commercial spaces, transit station, and housing. Also included in the site program are public outdoor spaces that are meant to serve as gathering spaces for residents and connect the architectural elements together. The architectural program has been divided into five categories Social Services, Community Services, Recreation and Entertainment, Cultural Buildings, and Business Development.

Architectural Program	**90,243 SF**
Social Services	18,813 SF
Community Services	11,509 SF
Cultural Buildings	22,194 SF
Business Development	9,252 SF
Recreation and Entertainment	28,475 SF

Figure 28: Landover, Maryland Community Center Program Elements
All portions of the program are to be equally related to each other. No on program element takes precedence over the other as all are important to community development.

Social Services

Common Spaces		**7,863 SF**
1	Reception	300 SF
4	Meeting rooms (120 SF each)	480 SF
4	Conference Rooms (200 SF each)	800 SF
2	Group Counseling Rooms (300 SF each)	600 SF
2	Restrooms (200 SF each)	400 SF
1	Lunchroom/Vending Spaces	200 SF
1	Mail Room	100 SF
2	Janitor's Closet(s) (50 SF each)	100 SF
1	Mechanical/Service/Circulation	4,883 SF
Social Services Administrative Offices		**2,500 SF**
1	Director	200 SF
3	Deputy Directors (120 SF each)	360 SF
1	Manager of Marketing	200 SF
10	Admin. Support Staff (120 SF each)	1,200 SF
1	Conference Room	200 SF
1	Copy/Fax/Storage	80 SF
1	File Room	100 SF
Social Services Program Offices		**3200SF**
1	Emergency Housing Assistance	450 SF
1	Emergency Food Assistance	450SF
1	Eviction Prevention	450 SF
1	Volunteer Services	450 SF
1	Planned Parenthood	450 SF
1	Teenage Parents in School	450 SF
1	Job Training/Placement Services	450 SF
Juvenile Services Offices		**3,000 SF**
1	Supervisor	200 SF
1	Administrative Aide	120 SF
10	Case Managers (120 SF each)	1,200 SF
4	Liaison Officers (120 SF each)	480 SF
1	Resource Department	120 SF
1	Transportation	120 SF
2	Advocates (120 SF each)	240 SF
1	Conference Room	200 SF
1	Copy/Fax/Storage	80 SF
1	File Room	100 SF
Juvenile Services Program Offices		**2,250 SF**
1	Family Preservation	450 SF
1	Screening & Assessment	450 SF
1	Sexual Abuse Treatment Services	450 SF
1	Drug Treatment & Rehabilitation	450 SF
1	Counseling Services	450 SF
	Total	**18,813 SF**

Community Services

Day Care Services			**1,654 SF**
3	Classrooms (300 SF each)	900 SF	
5	Restrooms (25 SF each)	125 SF	
1	Kitchenette	100 SF	
1	Office	100 SF	
	Mechanical/Service/ Circulation	429 SF	
Educational Center			**3,105 SF**
1	Information/Technology Center	700 SF	
1	Reference Library	1,000 SF	
2	Classrooms (300 SF each)	600 SF	
	Mechanical/Service/Circulation	805 SF	
Police sub-station			**6,750 SF**
	Offices/Workspace/Support Spaces	5,000 SF	
	Mechanical/Service/Circulation	1,750 SF	
		Total	**11,509 SF**

Cultural Buildings

Visual Arts Buildings			**4,050 SF**
1	Gallery Space	1,000 SF	
2	Studio Space (500 SF each)	1,000 SF	
1	Support Space	1,000 SF	
	Mechanical/Service/Circulation	1,050 SF	
Performance Arts Buildings			**18,144 SF**
1	Theatre	10,000 SF	
2	Rehearsal Spaces (600 SF each)	1,200 SF	
	Support Space (Lobby, W.C., etc)	2,240 SF	
	Mechanical/Service/Circulation	4,704 SF	
		Total	**22,194 SF**

Business Development

Executive Center			**3,240 SF**
10	Offices (size varies)	2,000 SF	
	Support Space (Lobby, W.C., etc)	400 SF	
	Mechanical/Service/Circulation	840 SF	
Incubator Spaces (5 @ 1000 SF each)			**5,000 SF**
	(includes support and mechanical space)		
Business Advising			**1,012 SF**
5	Offices (120 SF each)	600 SF	
	Support Space (Lobby, W.C., etc)	150 SF	
	Mechanical/Service/Circulation	262 SF	
		Total	**9,252 SF**

Recreation and Entertainment

Youth/Teen Center (24 hour access)			**3,375 SF**
1	Lounge	300 SF	
1	Game room	400 SF	
1	Snack Bar	400 SF	
4	Study/Tutoring Rooms (100 SF each)	400 SF	
2	Restrooms (200 SF each)	400 SF	
	Support Space (Storage, Lobby, etc.)	600 SF	
	Mechanical/Service/Circulation	875 SF	
Sports Center			**25,100 SF**
1	Basketball Court	10,000 SF	
1	Equipment Room (treadmills, weight machines, etc)	3,000 SF	
1	Pool Area	2,000 SF	
2	Classrooms (300 SF each)	600 SF	
	Support Spaces (Storage, lobby, etc)	3,000 SF	
	Mechanical/Service/Circulation	6,500 SF	
	Total		**28,475 SF**

Parking

For the purpose of this thesis, parking is calculated based on the square footage of the entire program not just the office spaces. The community center program is 90,243 SF. The standard for Prince George's County Maryland requires 1 parking space per 250 SF of space. Under those guidelines the community center would require 361 parking spaces. The Transit Oriented Design philosophy suggests providing only half of the parking spaces required, encouraging the use of transit. Following that logic, the parking requirement for the community center is 180 spaces.

Chapter 4: Crossing the Street

The street, which is the public realm of America, is now a barrier to community life.

~ Andres Duany

As Allan Jacobs states is his book Great Streets, streets play many important roles in the everyday lives of individuals from providing structure to the built environment, to being the location of social and commercial interaction, to providing venues for political expression. Streets provide connectivity, but in their best forms streets are more than just mechanisms connecting you with one place to another by driving. A great street is one that allows pedestrians to connect with the use on the other side and inspires and encourages people to connection socially with one another. Part of this mandate is fulfilled in the physical form of the street and its surrounding buildings, and part is fulfilled by the uses and activities placed within those buildings.

The most common examples of what a great street should be were often built in a time when cars were not such an important part of everyday life. There was a period of time where all street development was focused on the most efficient movement of vehicles from one place to another. Now there has been a shift in focus that says the best way to do things is to focus on pedestrian environments and the use of mass transit. To simply state that one system is right and the other is wrong is an overly simplified analysis of the problem that will lead to ineffective solutions. Instead, design should focus on ways to have the car and the pedestrian exist harmoniously together.

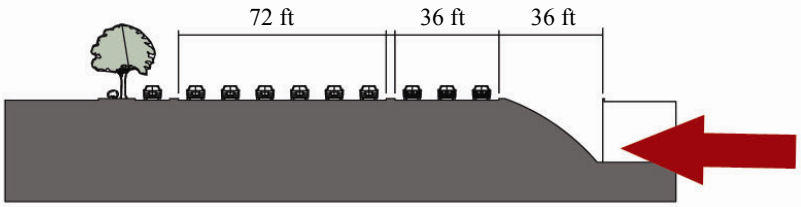
Landover residents face many barriers to connectivity, some of which are physical and others that are psychological. One such psychological barrier is that there is nothing within the community to draw residents from one neighborhood to another. In many cases what lies across the street are more houses that generally look exactly like your own. Another psychological barrier exists in the perception that one has to get in his/her car and drive somewhere else to get what is needed, a person has no reason to

walk anywhere within the community. This need to drive from place to place also limits the amount of informal social interaction that would occur more readily in a pedestrian centered environment. The proposed neighborhood and community centers will begin to remove these psychological barriers, as residents will have reasons for moving within their own community.

This increased reason to stay and move within the community only places more emphasis on the physical barriers that exist in the forms of Landover Road, Brightseat Road, and the Capital Beltway. All three of these roads are nearly impossible for a person on foot to navigate safely. At the site, pedestrians are dealing with six to ten lanes of high speed traffic. These issues must be addressed in order to make the community center assessable to the residents.

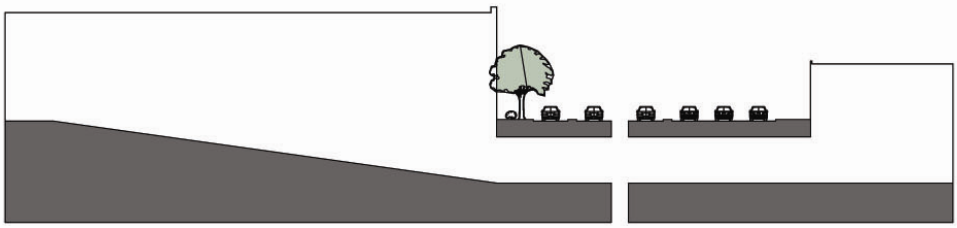
Each of these streets needs to be addressed in a different way. Landover Road's relationship to the site suggests that it would be best to allow pedestrians to pass below grade. The Beltway is more conducive to having pedestrians cross above grade, and Brightseat Road would be best crossed on grade. Following is an analysis of these three systems to determine the positive and negative aspects of each and what specific elements are needed to make each method successful.

Landover Rd- Crossing Below Grade



Section- Landover Road

Landover Crossing Shopping Center's position below the level of Landover Road suggests that the most appropriate approach to pedestrian connection is to move below grade. Tunneling under Landover Road, however, presents a number of problems including issues of light and air and safety.

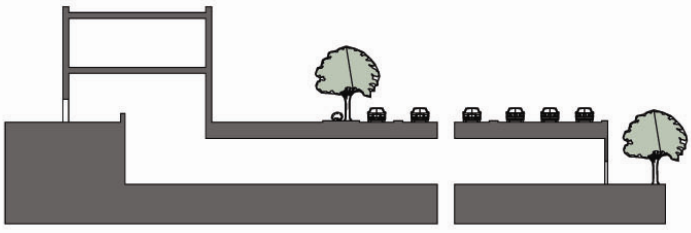


Underground passage through change in grading

0 15 30 60 feet

While moving under Landover Road seems like a natural occurrence when coming from the shopping center side, it is not so natural going in the other direction. One option for tunneling is to slope the ground plane on the mall side so that this transition between the grades becomes more casual. This is shown in the diagram above. In this case, however, there would be little or no natural light as you reach the middle of the tunnel and, unless started a significant distance from the road, the slope of the ground will make it difficult to have continuous program use as you move from one site to the other.

Another option, shown below, is to allow a building to negotiate the change in grade. In this case, a person would not necessarily be conscious of the fact that he/she is moving below Landover Rd, achieving the stated goal of making this transition seem as if it was part of the natural progression. This also addresses safety issues, as the building will be active during the day and closed after hours, discouraging any anti-social behaviors.



Using the building to change grade

0 15 30 60 feet

Figure 29: Methods for crossing under ground- Landover Rd., Landover, Maryland
Having pedestrians cross streets underground requires special attention to making the experience seem like a natural extension of their movement.

Capital Beltway- Bridging the Gap

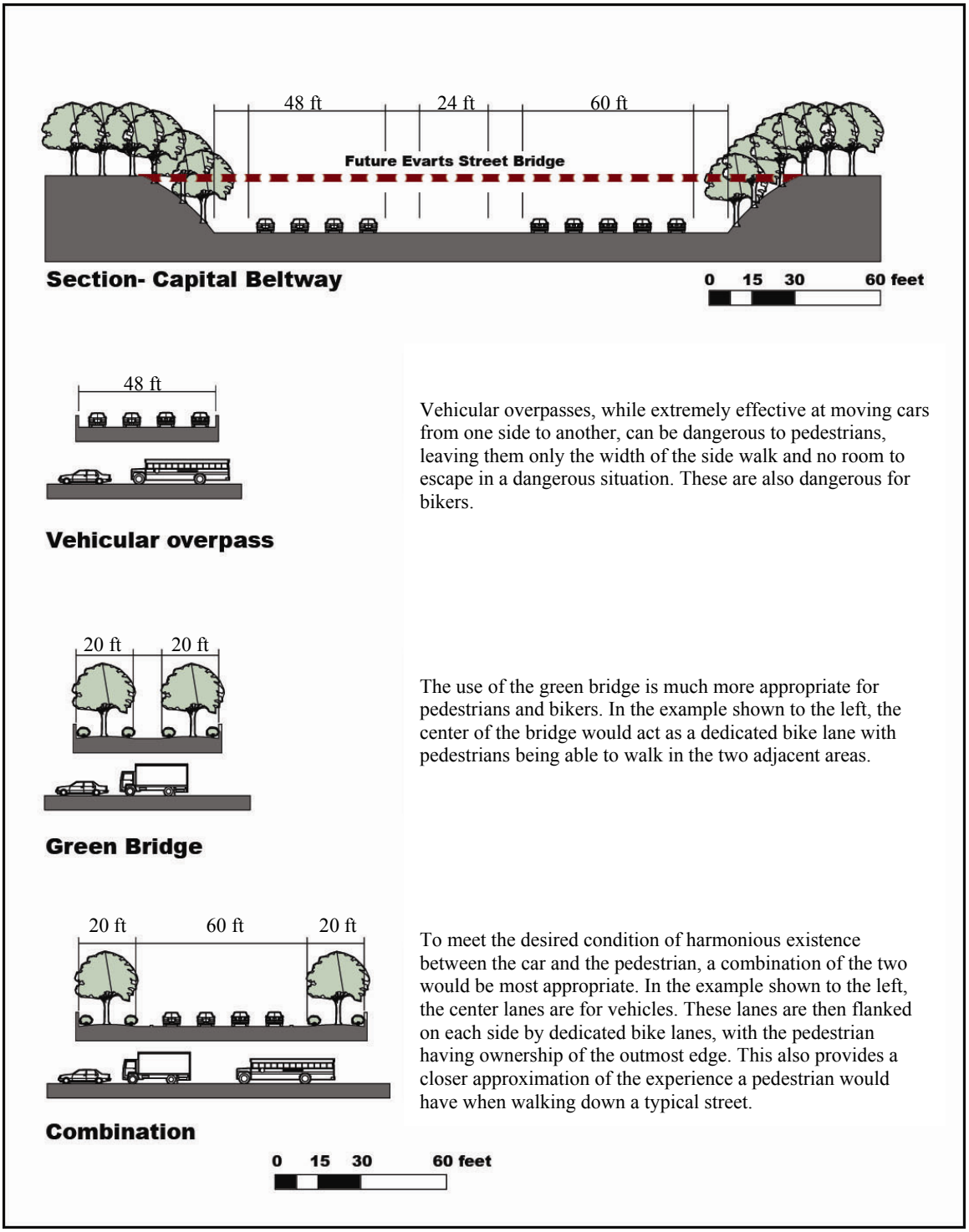
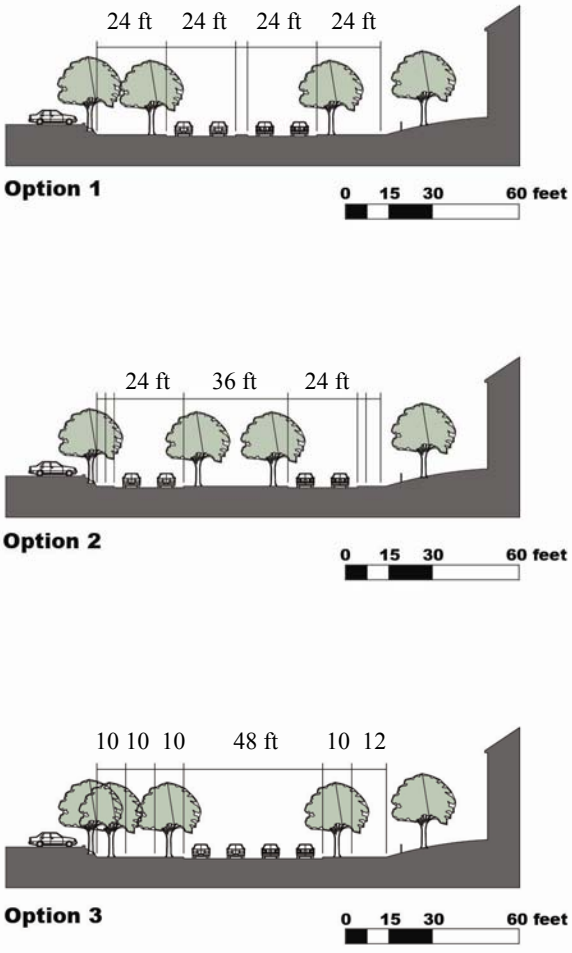


Figure 30: Methods for crossing above grade- Capital Beltway, Landover, Maryland
Bridges designed specifically for cars are dangerous to pedestrians and bikers, and bridges designed solely for pedestrians and bike riders can feel confining and uncomfortable. The best alternative is to accommodate both in a bridge that efficiently moves cars but also feels comfortable to the pedestrian or biker.

Brightseat Road- Crossing on Grade



Pedestrian friendly streets accomplish two things. First they allow for enough room for people to socially interact with each other and second they allow pedestrians to cross from one side of the street to the other with a reasonable amount of safety. In all three options presented for crossing Brightseat Rd the number of travel lanes has been reduced from six to four to reducing the amount of traffic a pedestrian would have to negotiate.

In option one the street section has been adjusted to allow for wider sidewalks on both sides of the streets. This will allow for gathering on the side of the street that will hold the community center, and will better accommodate the residents of the apartment complex across the street who gather to wait for the bus.

In option two the center island is 36 feet wide, providing a place where pedestrians can stop and interact with each other without out feeling threatened by the vehicular traffic that exists on either side. This option also provides the opportunity for the center island to contain a dedicate bike lane, away from traffic.

Option three is similar to option one. The major difference is that while the side walk on the side of the street with the apartments is only bounded on one side by trees, the sidewalk on the community center side takes on the feel of a pedestrian scaled version of the vehicular street being bounded by trees on both sides.

Figure 31: Methods for crossing on grade- Brightseat Rd, Landover, Maryland
Allowing pedestrians to cross on grade is not necessarily about reducing the amount of traffic on the road so much as it is about slowing down the traffic and breaking the street in manageable sections.

Chapter 5: Interactive Building

"This architecture of styles and space is antispatial; it is an architecture of communication over space; communication dominates space as an element in the architecture and in the landscape."

"The commercial persuasion of road-side eclecticism provokes bold impact in he vast and complex setting of a new landscape of big spaces, high speeds, and complex programs."

~ Robert Venturi

The building scale is becoming harder to design in today's society, especially as it relates to the ability to connect with the people who will be encountering them. In the book The Modern Metropolis, Hans Blumenfeld defines three scales of building. The first is human. This describes buildings that are in someway proportioned to the human form. The second scale is the super-human. In this scale buildings are still proportioned to the human, but are done so in a way that makes them feel exceptionally large or grand. The final scale is the extra-human. At this scale buildings are no longer designed for the human. Instead they are design to accommodate the technologies that we use to improve our lives, such as airplanes and cars.

These three scales, human, super-human, and extra-human, can be used to describe the way that people interact with buildings. Examples of human scale interaction exist in the main streets and city blocks all over the country. These areas are designed with emphasis being placed on the experience of the pedestrian. Windows exist for people to see events occurring within the building. Even in the tallest sky-scrappers of New York there is an emphasis on the human experience expressed in the implication of a building base scaled for the person. Effort is put into mitigating the presence of the car within this environment. When driving down the street ones view of the buildings is often impaired by the streetscapes designed to improve the pedestrian experience.

When searching for examples of extra-human interaction one can look to Wal-Mart or roadside billboards. These two examples are designed to accommodate the car. Billboards are designed for their ability to be read easily by a person passing at high speed on the highway. Wal-Mart provides an example in the expanse of parking located in front of the stores. Billboards in general are not meant to be experienced by the

pedestrian; Wal-Mart simply ignores the importance of the pedestrian experience, focusing instead on how to get people to their stores and the merchandise inside. When walking along the façade of the store, one is greeted with an unadorned stucco surface, painted in a neutral color.

The suburban environment is designed to the extra-human scale. Planning decisions and architectural decisions reflect our dependency on the car. The sea of parking is constantly there, separating the pedestrian from the building. The parking lots set off a chain reaction that continuously denigrates the quality of the pedestrian experience. Because of the parking, buildings are often set back so far from the street that they have forfeited their ability to interact with the person in the vehicle. This inability to interact with the traveler has lead to a decrease in need, or desire, to place emphasis on the design and detail of building facades. In Landover specifically, the face of their civic buildings are depressingly similar to the bland face presented by Wal-Mart. The result is that suburban places, retail centers and civic facilities, are nodes of activity that exist within a space. They do nothing to encourage social interaction and contribute nothing to the definition of the character of a community.

This thesis asks how buildings can begin to play a bigger role in the community. The first step to improved connectivity between the building and the community is to understand and accept that, in a suburban environment, buildings must respond to both the human and extra-human scales. Thought must be given to the experience of the motorist and the pedestrian. This interaction can be established through both passive and active methods. When defining passive interaction, it is the ability of the building to provide information to the people who encounter it. This could be information about the

culture of the people who live in a region, and could be expressed in the aesthetic of the building. This information could also allow a passerby to understand what is happening within the building without the necessity of a sign that states such. The information could simply announce to a passerby that they have arrived at a place. In some cases, the building can provide information by in fact becoming a sign, similar to the buildings in Time Square, New York. .

Figure 32: Times Square New York
The buildings in Time Square provide an example of passive interaction. These buildings have become and important aspect of the New York community, both in terms of providing information to the people who work there, and as a symbol that identifies that community to the rest of the world.

The other aspect of interaction is active. Can the building actually respond to the person as he/she enter and move through it? The podium light wall at 7 World Trade Center is an example of active engagement as it has a blue light that follows a person as he/she move around the building. Another form of active interaction is the ability of the

building to change as the needs of the users change. For rooms to expand and contract as the number of people using them or the type of function happening within them changes. For a space that was meant to permanently accommodate one type of function to be able to do the same for another when the first becomes obsolete.

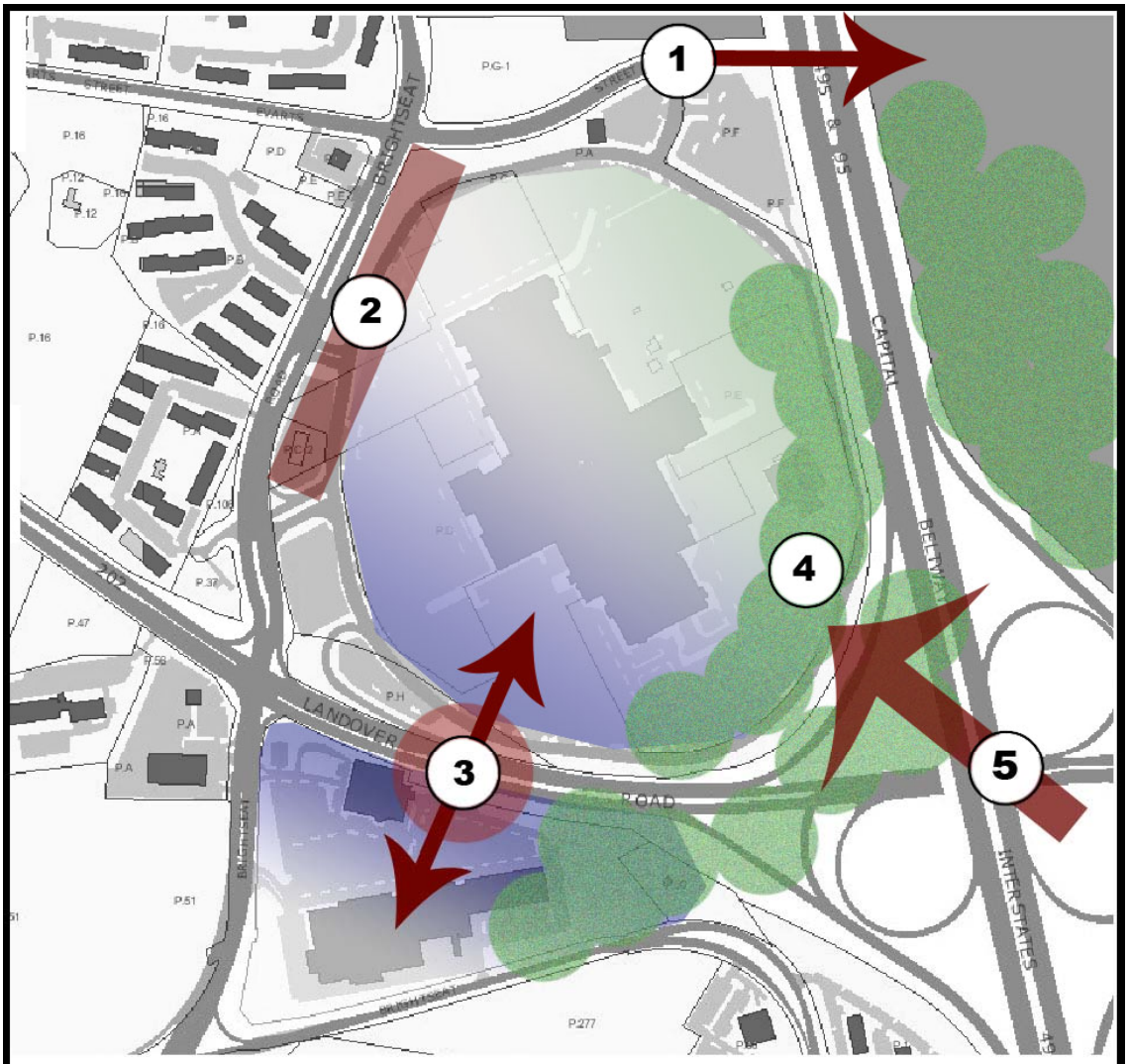
This thesis looks at two architectural approaches to achieving passive and active interaction, building skins and systems building. Systems buildings are examined for their ability to create an architecture that is flexible. Building skins are examined for their ability to go beyond simply providing a face for the building. Skin technology has advanced to the point where they can become dynamic surfaces that can be both passive and active. Building skins are also considered for their potential uses on the interior as well as the exterior of buildings.

Chapter 6: Site Design Strategies

Design is more than meets the eye. Design is about communicating benefits. Design is not about designers. Design is not an ocean it's a fishbowl. Design is creating something you believe in.
~ Chuck Green, Principal, Logic Arts Corporation

What is design?... It's where you stand with a foot in two worlds—the world of technology and the world of people and human purposes—and you try to bring the two together.
~ Mitchell Kapor, software designer (from his book “Bringing design to software”)

Urban Scale Design Strategies

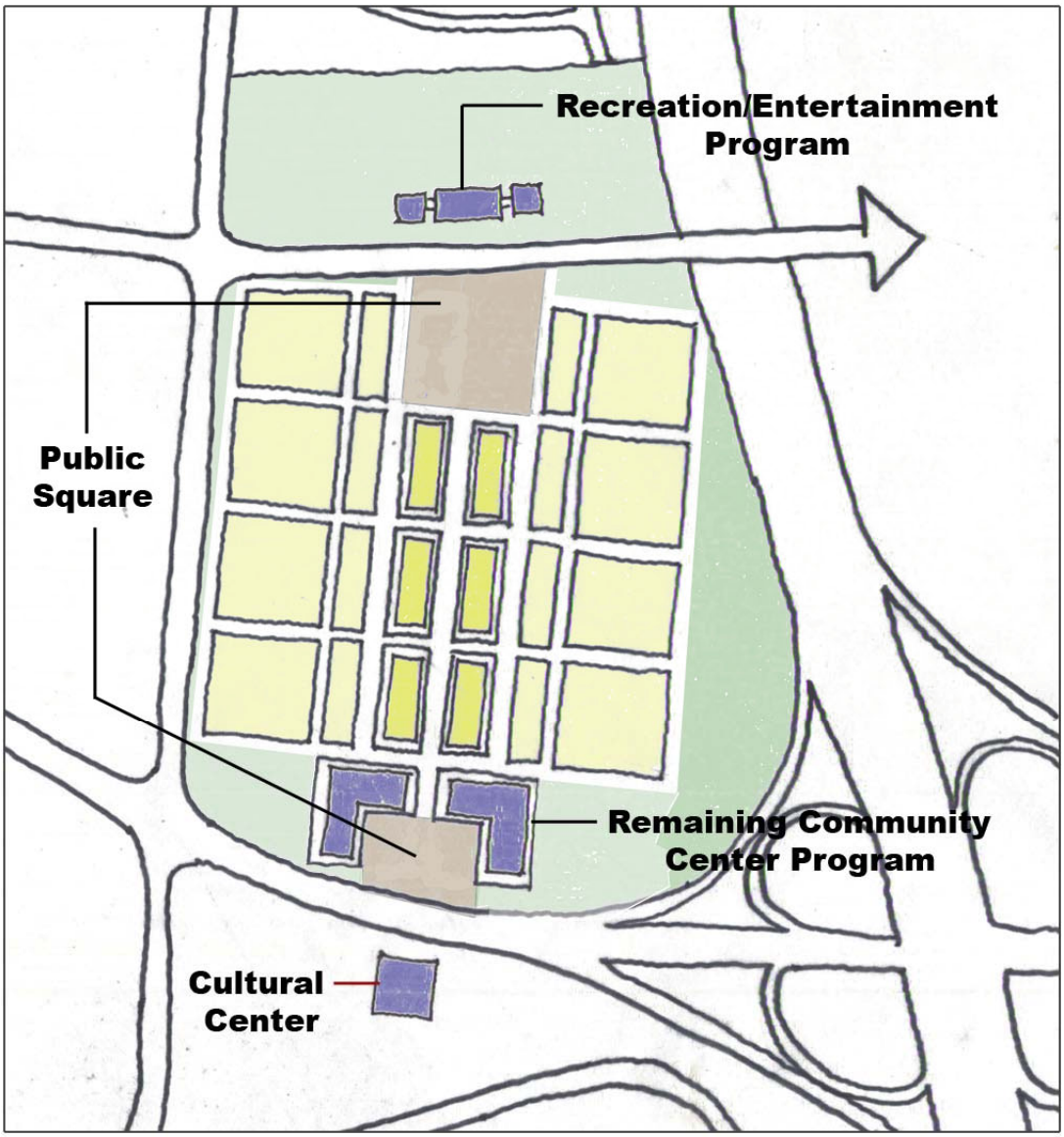


1. To address the need to connect the new community center to all of the Greater Landover area each parti includes the proposed Evarts Street Bridge
2. Currently the buildings along Brightseat Road are set back from the street and sporadic in nature. Each parti addresses the need to create an edge along the road.
3. A transit station is added to the site. The transit station serves as a connector between the residents and community center elements located on the north and south sides of Landover Road.
4. A natural edge is maintained along the eastern portion of the site. This edge serves two purposes. First it acts as a noise barrier between the beltway and the buildings on the site. Second it provides opportunity for parks and trails that can start to connect the areas divided by the Beltway and Landover Rd.
5. Buildings should be oriented in a way that they maximize existing views onto the site from Landover Rd and the Capital Beltway. The buildings placed on this site begin to serve as the identifier for the Landover community.

Figure 33: Parti Generators

The Landover Mall site dictates certain opportunities, constraints, and needs as it relates to the development of a site plan strategy. Above is the set of guidelines that act as the foundation for the generation of all the design parties.

Parti 1- Urban Design Scale



The first parti provides two public squares connected by a main street. The northern square supports the recreation and entertainment program elements. The southern square serves as an arrival point for the transit station and community services buildings. The cultural center is located across Landover Road at the end of the main street axis. Buildings along the main street has commercial functions on the ground floor and housing above.

This parti is successful at creating a sense of place for the community center program by grouping it on a shared plaza. The plaza in front of the recreation center may not be very useful as it is located across the street. While the eastern community building begins to address the views into the site from the Beltway and Landover Road, this arrangement does not yet take full advantage of the opportunities.

Figure 34: Parti 1 Site Plan

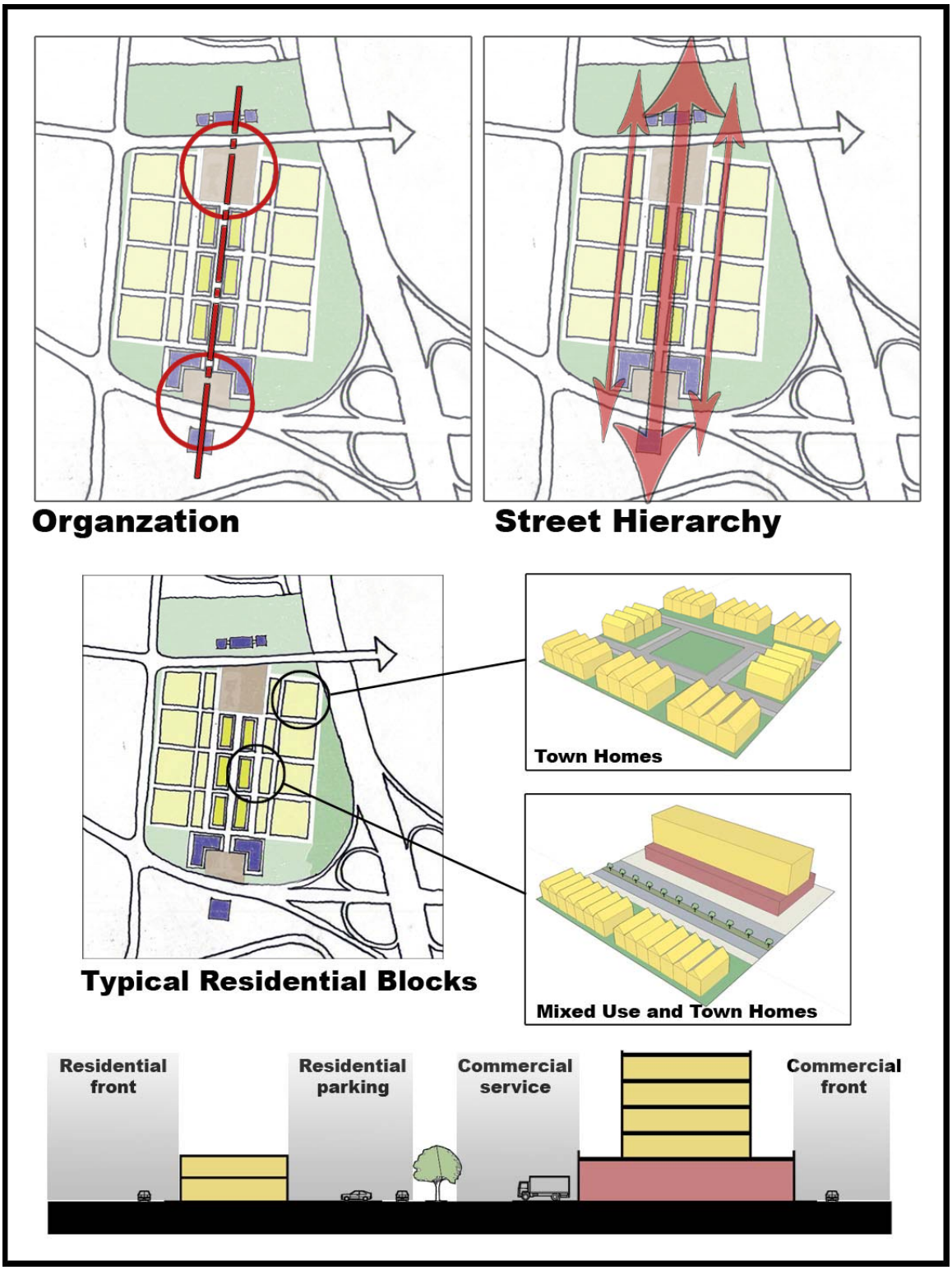
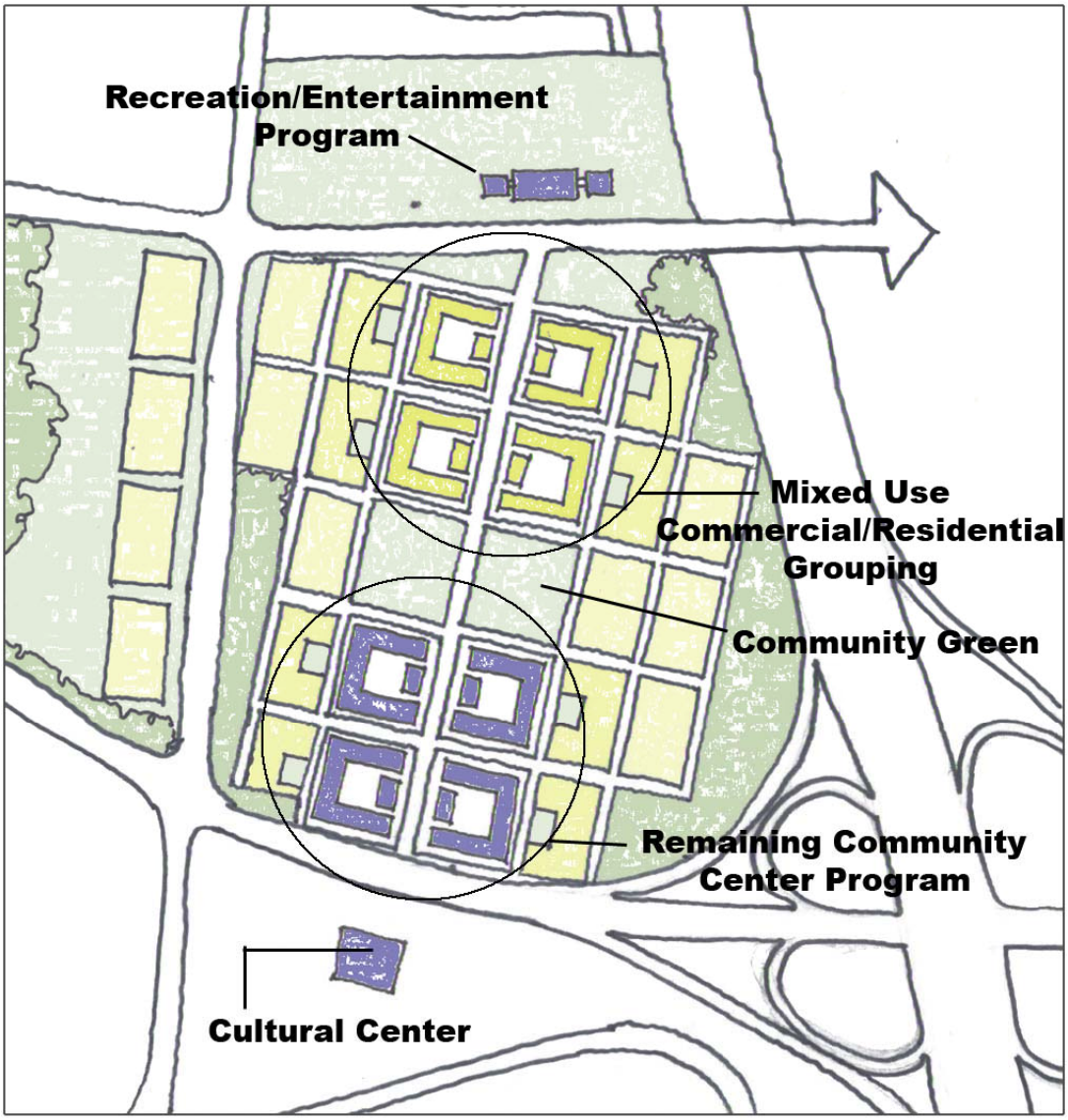


Figure 35: Parti 1 Continued

Parti 2



This parti is organized by a main street, with the transit station at the southern end and the recreation/entertainment center at the northern end. This parti provides a central community green which is to be shared by the residents of the site and the community center functions. This parti relies on building groupings. The grouping south of the community green is comprised of community service functions. The grouping north of the community green will be is mixed use, combining residential and retail functions.

This parti does not provide as great a sense of arrival when exiting from the transit station as Parti 1. It also does not do as good of a job connecting the program elements on both sides of Landover Road. This scheme completely turns it back to the views into the site from the Beltway and Landover Road. The advantage to this scheme is the courtyard arrangement for the community buildings.

Figure 36: Parti 2 Site Plan

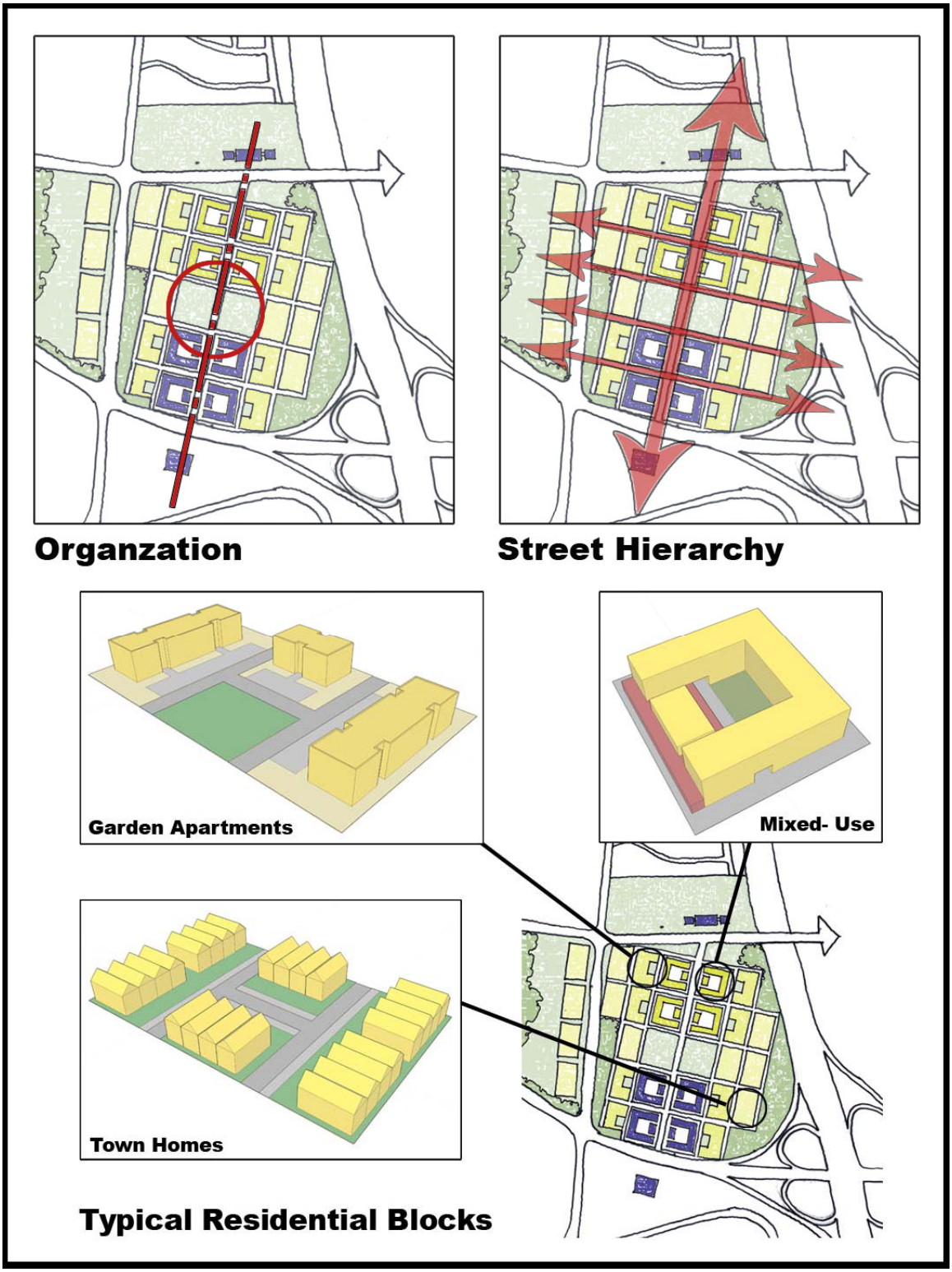
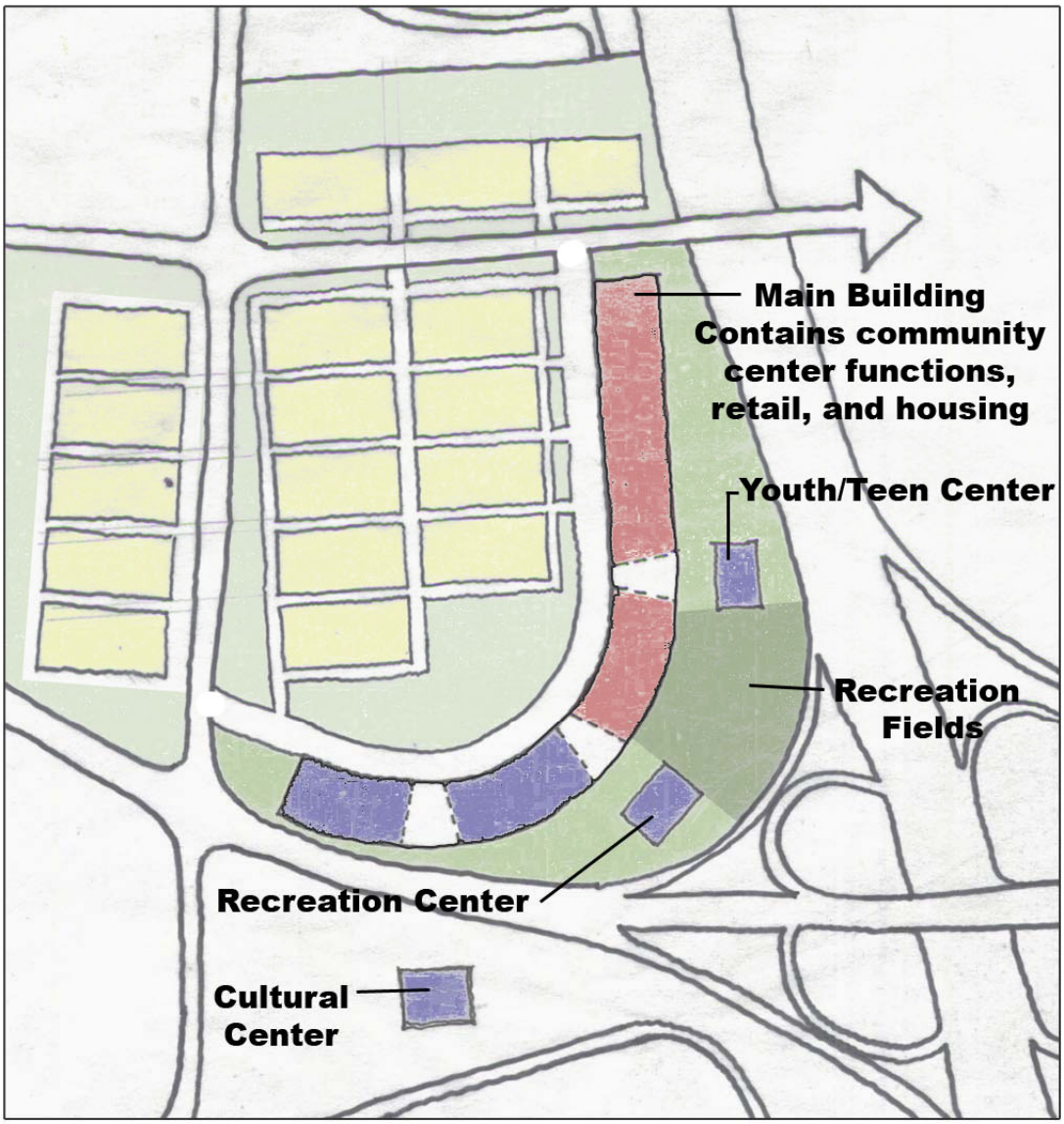


Figure 37: Parti 2 Continued

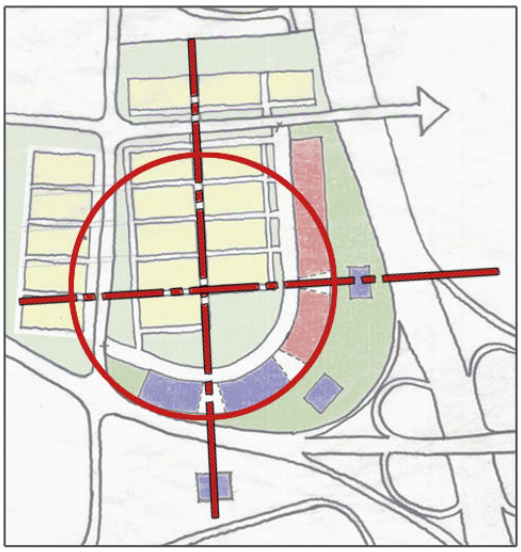
Parti 3



The third parti relies on one main building that contains the majority of the community center program. The inside of the curve that forms the main building is bounded by a boulevard. The outside of the curve is community park space, some of which is formalized with playing fields for the recreation center. While the main building is essentially whole, there are openings aligned with the main axes created by the residential community that allow views to the civic functions located behind.

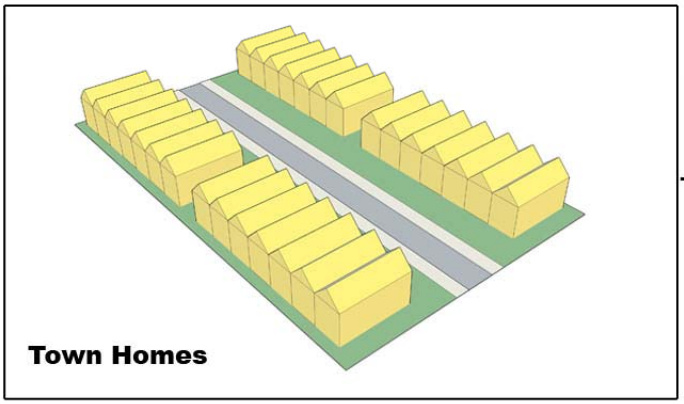
This parti does a better job of taking advantage of the views onto the site from the Beltway and Landover Road. Creating a place of arrival from the transit station is still not as clear and the sense of the community space spanning Landover Rd remains more visual then experiential.

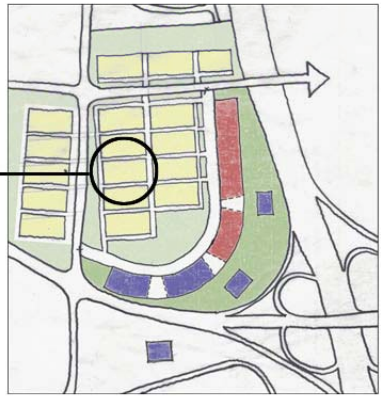
Figure 38: Parti 3 Site Plan



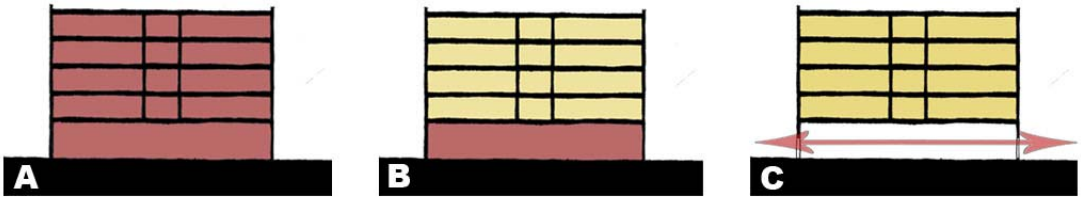
Organzation

Street Hierarchy





Typical Residential Blocks



As one moves through the building the sectional use changes. Section A represents the portion of the building closest to the transit station and exclusively contains community center functions. Section B holds a mix of residential and retail uses, Section C represents an open ground floor to connect with the community green.

Figure 39: Parti 3 Continued

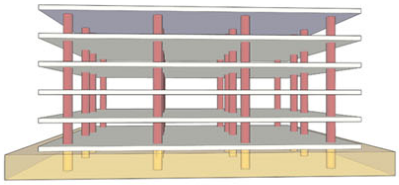
Building Scale Design Strategies

Flexible Building System

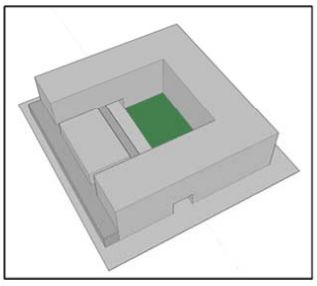
The term interactive building, as defined by this thesis, suggests that the most appropriate building system for the community center is one similar to the Maison Domino. This structural system allows for flexibility in two ways:

1. As the typical section of the mixed use building has housing above and retail below, the structure can be design to the housing dimension, allowing the retail on the ground floor to freely take on whatever ever size and shape it requires. This is seen in the Swiss Pavilion, designed by Le Corbusier.

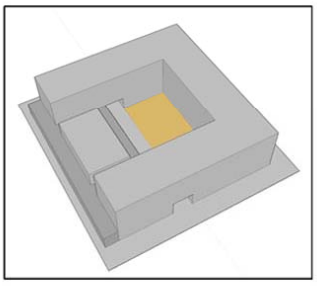
2. Wall can exist independent of the structure. With the use of a sturdy, yet temporary, wall system rooms can be created and recreated as the needs of the community change.



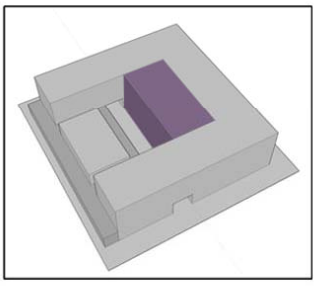
Swiss Pavilion
http://home.worldonline.dk/jgkjelds/pavilions.html
19 December 2006



In this iteration of the courtyard building seen in parti 2, the center is used as a semi-public green space



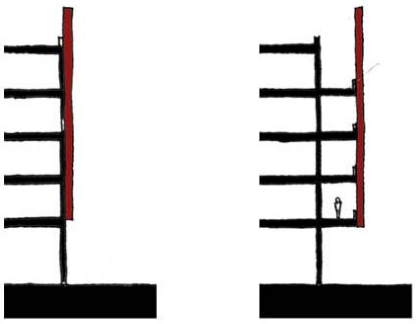
The center space can also be hardscaped and used as surface parking for residents of the building



A final option is for the center area to be filled in with a parking structure that could handle parking for all users of that building.

Using the Building as the Billboard

http://chacocanpecarry.tripod.com/index_files/image002.jpg



These diagrams represent two options. In the first the actual face of the building serves as the billboard. In the other the bill board is screening another function.

Figure 40: Building Design Strategies

Chapter 7: Design Conclusions

As the design of the new community center for Landover progressed, flexibility became the issue that dominated design decisions. In today's climate sustainability has become a major driving force. Unfortunately, sustainable practice tends to focus on the need to use renewable resources, green elements, sun control and utilization, and energy efficiency. It is important to begin to think of sustainable design as going beyond meeting the requirements that will gain immediate LEED ratings. Sustainable design requires an expanded life cycle. It is responsive to its physical environment as well as its social environment. It implies an investment in both the present and the future. It requires a degree of flexibility that will allow for adjustments as the physical and social environment change. Lastly it calls for a mix of uses, accomplished either by accommodating more than one use from the beginning, or by being able to support a completely different use in the future.

There are two components to the final design of this thesis. The first is the urban design which explores ways in which the Landover Mall site can be transformed into a new place within the community. How can the site provide for the needs of the current community while preparing for the future possibilities? The second is the building in which the community building typology is challenged both in terms of its programming and its construction. The emphasis in both cases is on allowing for the greatest opportunity for change in the future.

Urban Design Conclusions

Landover, like many other places, experienced a change in it regional prominence. As a result of its declining importance and its increasing crime rates, the Landover Mall was closed. The greatest failing of this site is that it was single use in nature. Its structure was not easily adapted to new uses and its existing site conditions require significant intervention should a new program be conceived of for the site. These are the factors which led to the site being abandoned for the last five years and the mall structure being demolished in the summer of 2006.

Landover also has problems with connectivity. In the typical suburban fashion, Landover is made up of isolated residential developments which outlet onto a major arterial at one or two points. The area is divided into four quadrants by Landover Road and Brightseat Road. Pedestrian connectivity is very limited.

The design for this site addresses these issues in many ways. First it invests in the establishment of a permanent block structure. This new block structure allows for incremental re-development to occur, thus increasing its ability to adapt as conditions change. The resulting form of the community is influenced by Prince George's County's Green Infrastructure Plan. Areas previously identified as part of this plan are now connected by new open spaces and streets with bio-filtering elements. This represents not only an investment in the health of the environment, but in the provision of community space as well.

Figure 41: Master Plan

The proposed programming for the site calls for commercial uses along Brightseat Road and community functions along an east-west axis established by the new community green. Residential uses exist throughout the plan. The highest residential density is located at the intersection of Landover Road and Brightseat Road. This density decreases and you move away from the center, allowing for a seamless transition into the existing residential neighborhoods. The program was chosen based on an analysis of the

site and its surrounding areas. At this time, Landover is not able to compete with the retail and office locations in the vicinity, thus residential use is the most appropriate for the interim. Once again, the new street grid will allow for the program of the blocks to change in proportion to and according with the needs of the area.

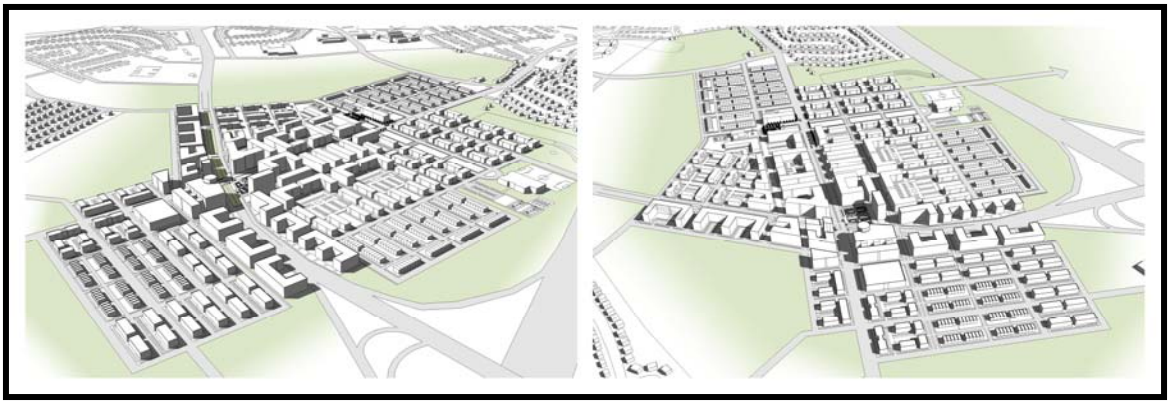


Figure 42: Aerial View of Site

A new transit stop has been located at the intersection of Brightseat Road and Landover Road. This stop is proposed as an addition to the Purple Line. The new transit stop will provide for better connections into and out of Landover. The transit stop will allow the area to absorb influxes in the amount of people who will be coming to the vicinity as its function and importance changes over time. Lastly, the metro station serves as the marker for a new center for the area and starts to define Landover as a destination.

To address other issues of connectivity considerable thought has been given to the improvement of Landover Road and Brightseat Road. The greatest change to Brightseat Road manifests itself in the addition of parking lanes in each direction. This parking will serve the retail establishments along Brightseat Road and will help in terms of reducing the speed of passing traffic. Landover Road has seen a more significant level of intervention. There is an inherent conflict between the highway mentality of Landover Road, which wants to move cars from east to west in the fastest possible manner, and the

desire to allow pedestrian connectivity in the north/south direction. To solve this conflict four lanes of travel (two in each direction) have been moved below grade allowing through traffic to continue at a high speed. What remains above ground is one moving lane and one parking lane in each direction for local traffic. This new condition is more easily navigated by pedestrians.

Figure 43: Landover Road Street Section

Figure 44: Brightseat Road Street Section

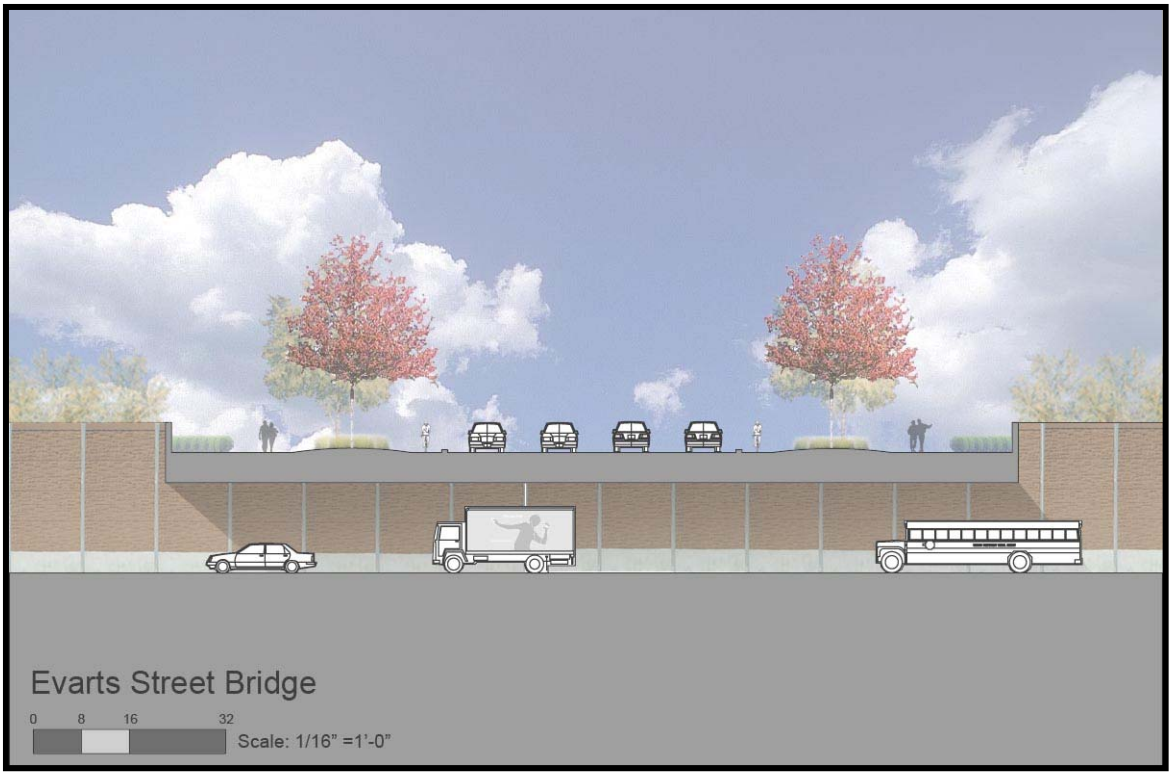


Figure 45: Evarts Street Bridge Section

Figure 46: Green Street Section

Figure 47: Perspective: Brightseat Road

Figure 48: Perspective: Landover Road

Building Design Conclusions

The design of the community buildings is focused on flexibility and the accommodation of change just as the urban design is. This emphasis on change necessitated rethinking the definition of the community typology. Currently community buildings, such as libraries, recreation centers, and the like, are single use in nature. As seen with the mall, these buildings are difficult, if not impossible, to re-program should their use no longer be needed. This problem is enhanced by community buildings being located deep within the fabric of existing neighborhoods. It is a tenant of this thesis that just as a viable community finds its existence possible because of a mix of uses, community buildings should also be mixed-use in nature. This will allow the local government to invest in something beyond recreational functions. It will also allow the community building to become a part of the everyday fabric.

The problem associated with this mixing of typologies exposes itself as one begins to consider their individual needs. Residential, office, retail, and institutional functions all have different needs as they relate to access, privacy, service, access to light and air and other issues. Thus, the first question became how does one design a single structure that can address all of these needs? The next second question is how does this structure change in response to changes in the program within over time?

The answers to these questions were found in the design of a building system. This system was conceived of as having three parts: the building structure, the inner skin, and the outer skin. Each of these elements was designed with programmatic use and flexibility issues in mind.

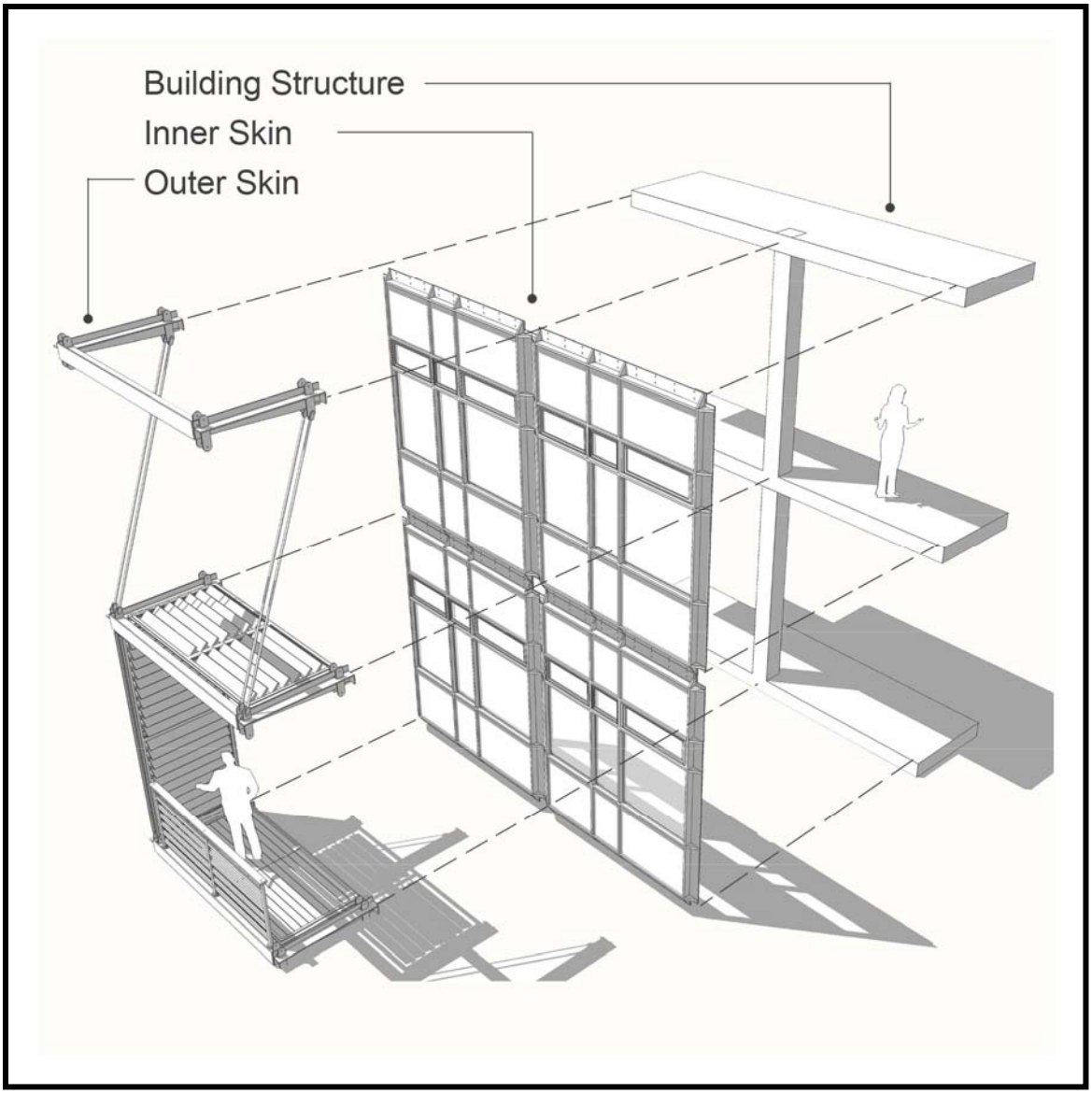


Figure 49: Exploded Axon of Building Components

The Building Structure

The building structure was thought of in terms of planning issues and sectional issues. A primary goal in the design of the building structure was to provide the largest areas of open space possible and use the fewest number of columns possible. Another goal was to provide good access to light and air in as much of the building as possible. The resulting structure is based on a 30’ x 30’ and 20’ by 30’ module. The building is

two modules deep. This is small in terms of the commonly accepted size for office floor plates. The smaller floor plate was accepted on the premise that the stricter requirements for residential access to light and air would be the determining factor if this building is indeed meant to easily fluctuate between the two uses.

The section of the building was designed with the understanding that the ground floor would primarily hold retail or institutional uses. Upper floors would be made up of some combination of residential and office uses. The ground floor uses of the building will change less frequently over the life span of the building, while the proportion of office to residential use above is likely to change more frequently. The ground floor of the building has a floor to floor height of 20'. This will allow for the greatest range of flexibility as that floor can be treated as one large open space, can be divided into a space with a mezzanine level, or can be divided into two floors if necessary. The upper floors of the building have a floor to floor height of 12'. This will produce a loft condition in residential spaces while allowing for the concealment of HVAC systems as needed in office spaces.

Parking is accommodated in below grade structures and the roof of the building contains inaccessible green space as well as green space that is accessible to the inhabitants of the building.

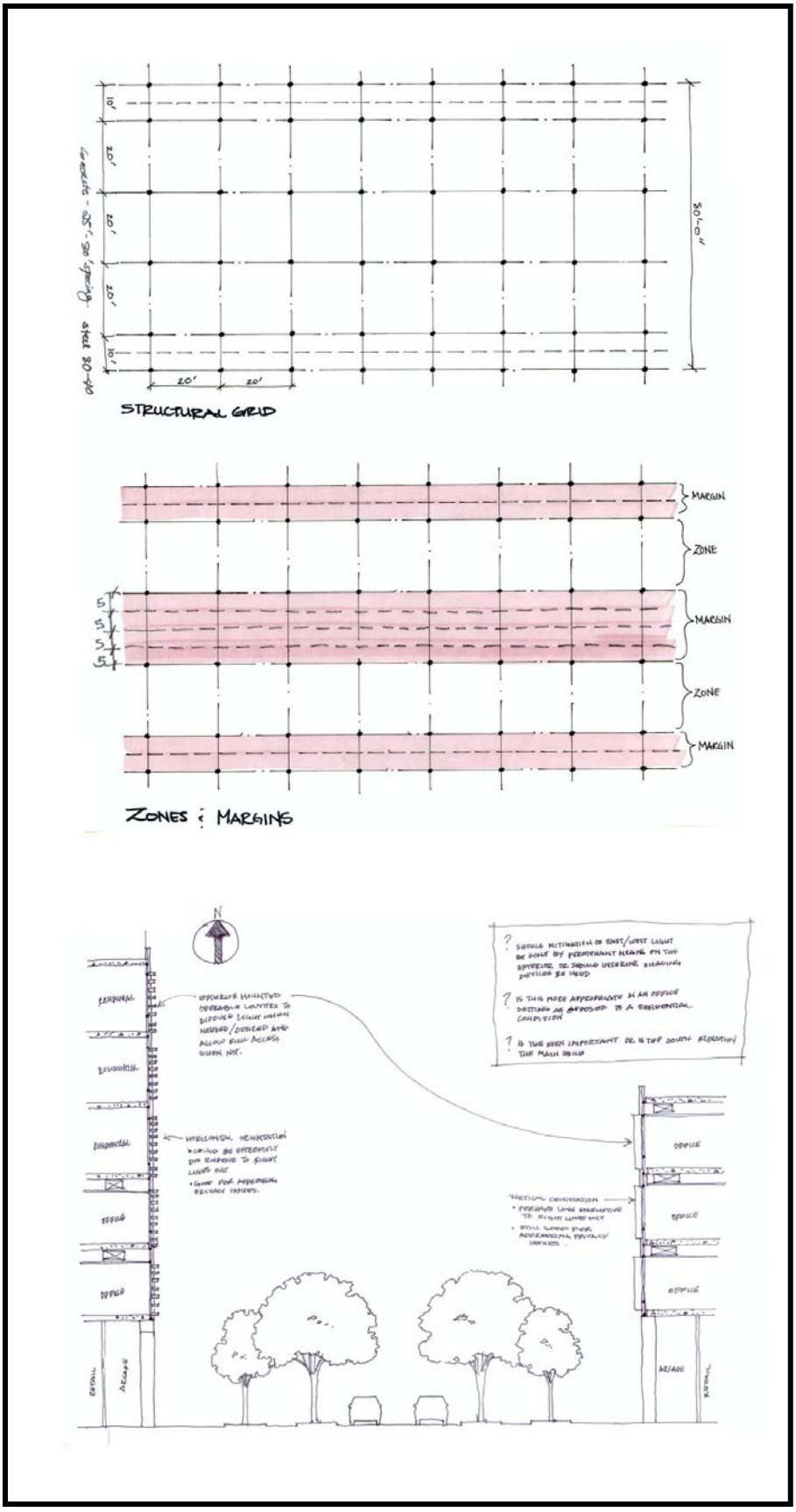


Figure 50: Building Structure Process

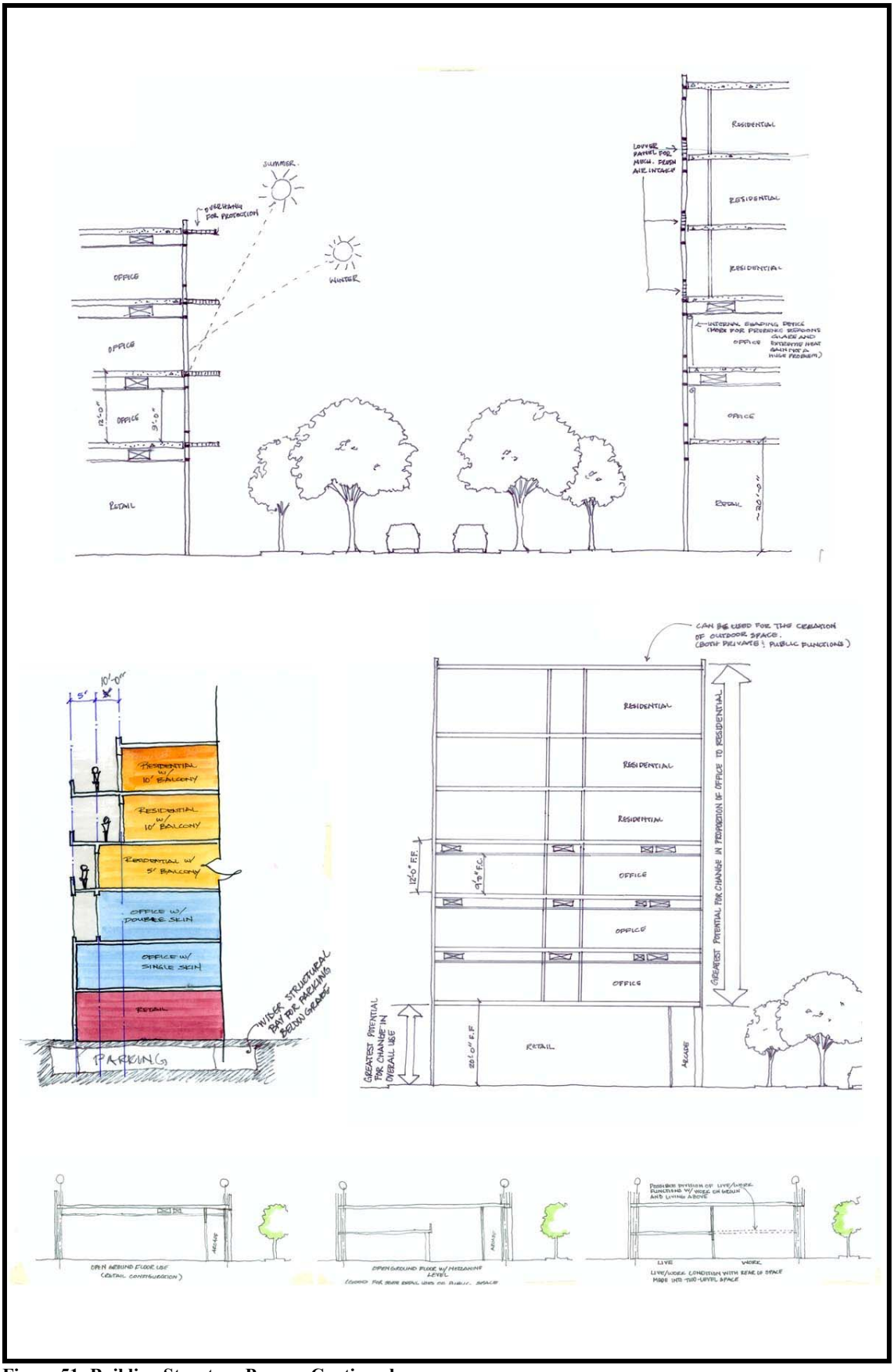


Figure 51: Building Structure Process Continued

The Inner Skin

The inner skin is defined as the layer that provides the thermal break between the building interior and the elements beyond. The Rue de Meaux housing project by Renzo Piano was used as a precedent for the design of this structure. The inner skin has been designed as a framework that can then be in filled with operable window units, vision glass, or paneling. The paneling option allows for a wide range of choices, allowing the designer to choose the material most appropriate to location, function, and surrounding structures.

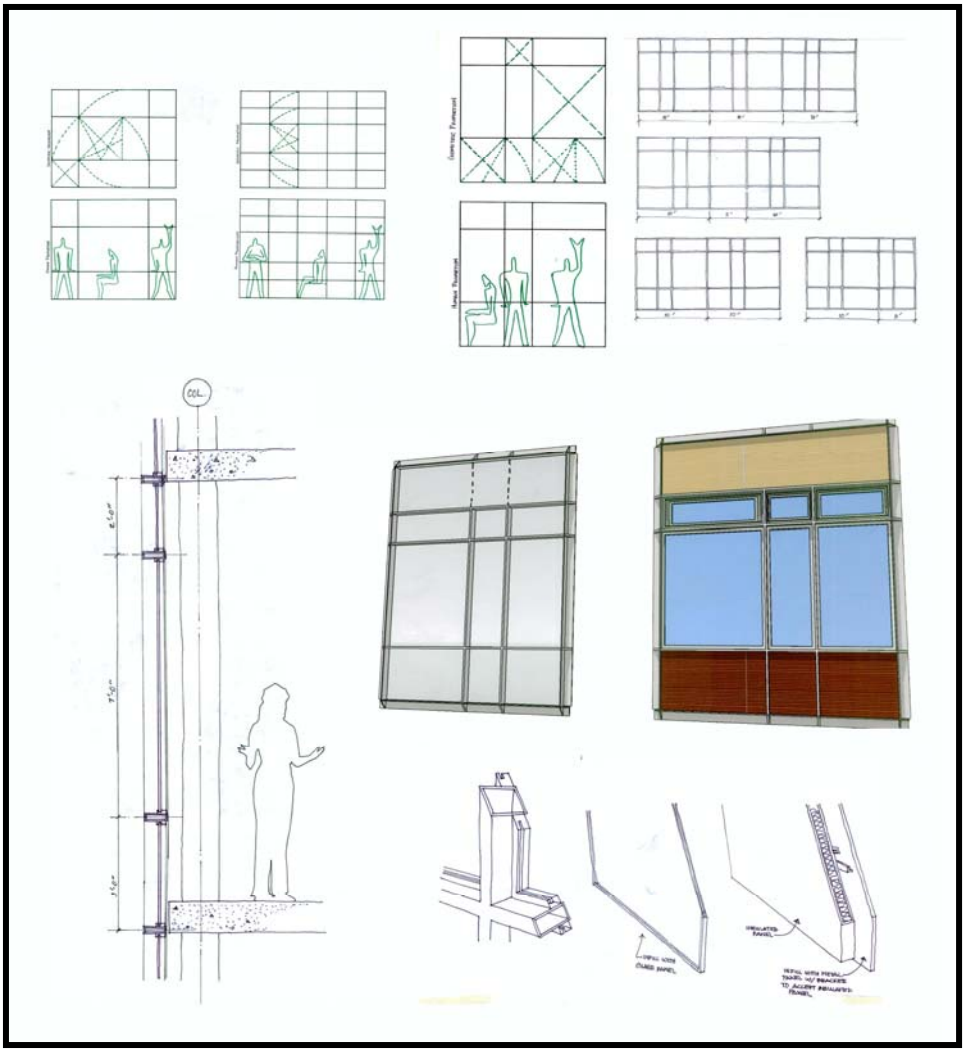


Figure 52: Inner Skin Process

The Outer Skin

The outer skin is designed to allow for the greatest range of flexibility and responsiveness as they relate to sustainable issues and functionality. This system was also conceived of as a framework with infill options. The vertical plane is designed to either remain open or can become in filled so as to provide shading or privacy services. The horizontal planes are treated in the same manner. They can either remain open or become in filled to provide shading or addition inhabitable space.

What each of these planes becomes in filled with is a function of orientation and program adjacency. In a condition with southern exposure, for example, the horizontal plane will be in filled to provide a shading condition. If the adjacent use is residential that infill will be of a nature that would allow for the provision of a balcony space. If the exposure is eastern the infill would be in the vertical plane so as to provide shading in the morning hours. The structure is designed to accommodate the addition of other elements such as railings, rolling shades, or the like.

While the structure is used in this thesis primarily for meeting shading requirements and providing balcony space, it is designed to accept a wider range of additions. These could include photovoltaic panels, a secondary skin structure, signage, and more. As conceived, decisions about what elements will be placed on this system and when these elements will be places is left in the hands of the designer. This decision was made based on issues of practicality and feasibility. As a future exploration, it would be interesting to see how this system could be adapted to allow each inhabitant to begin to express themselves through the addition of elements or personalized material choices.

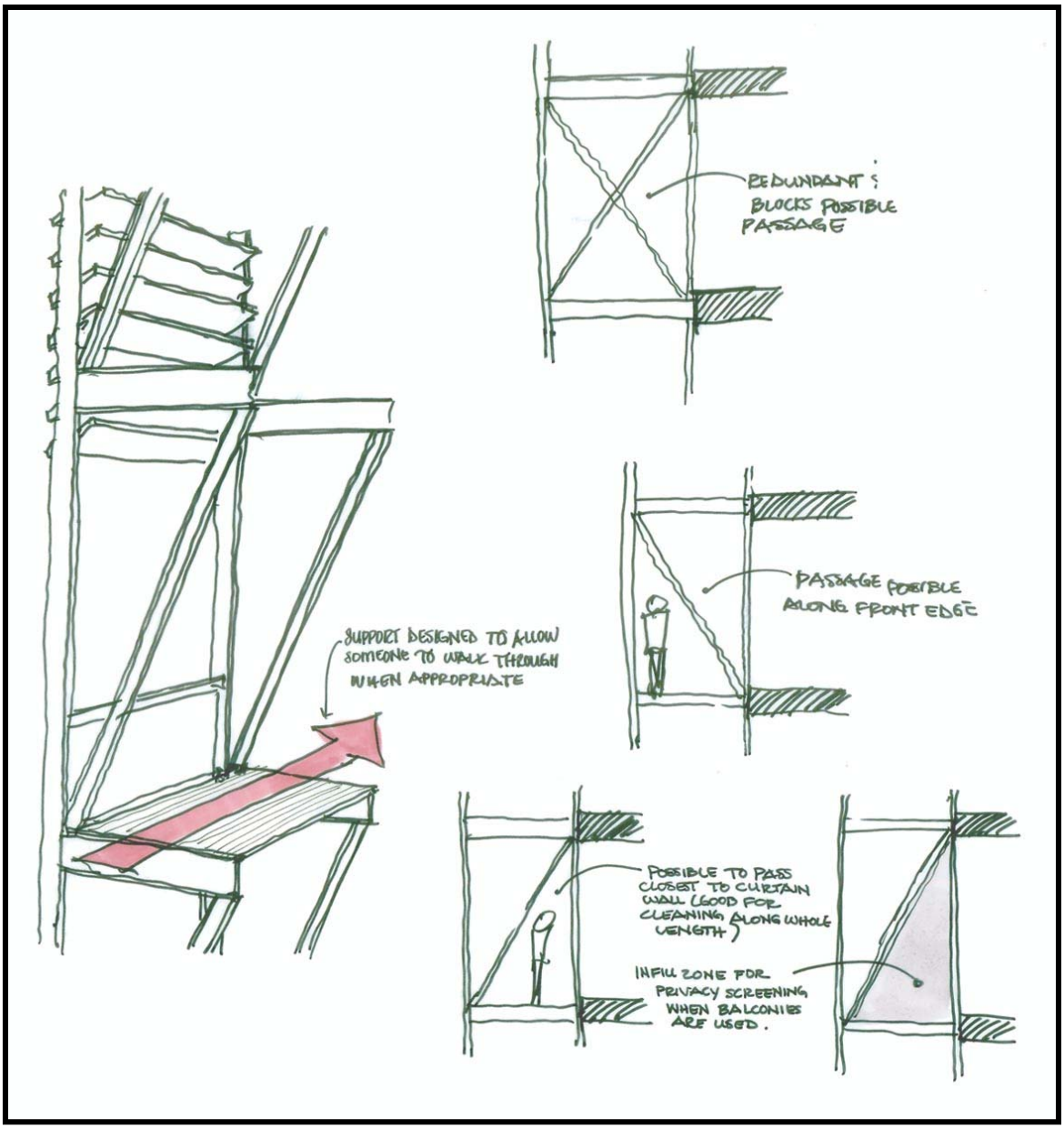


Figure 53: Outer Skin Process

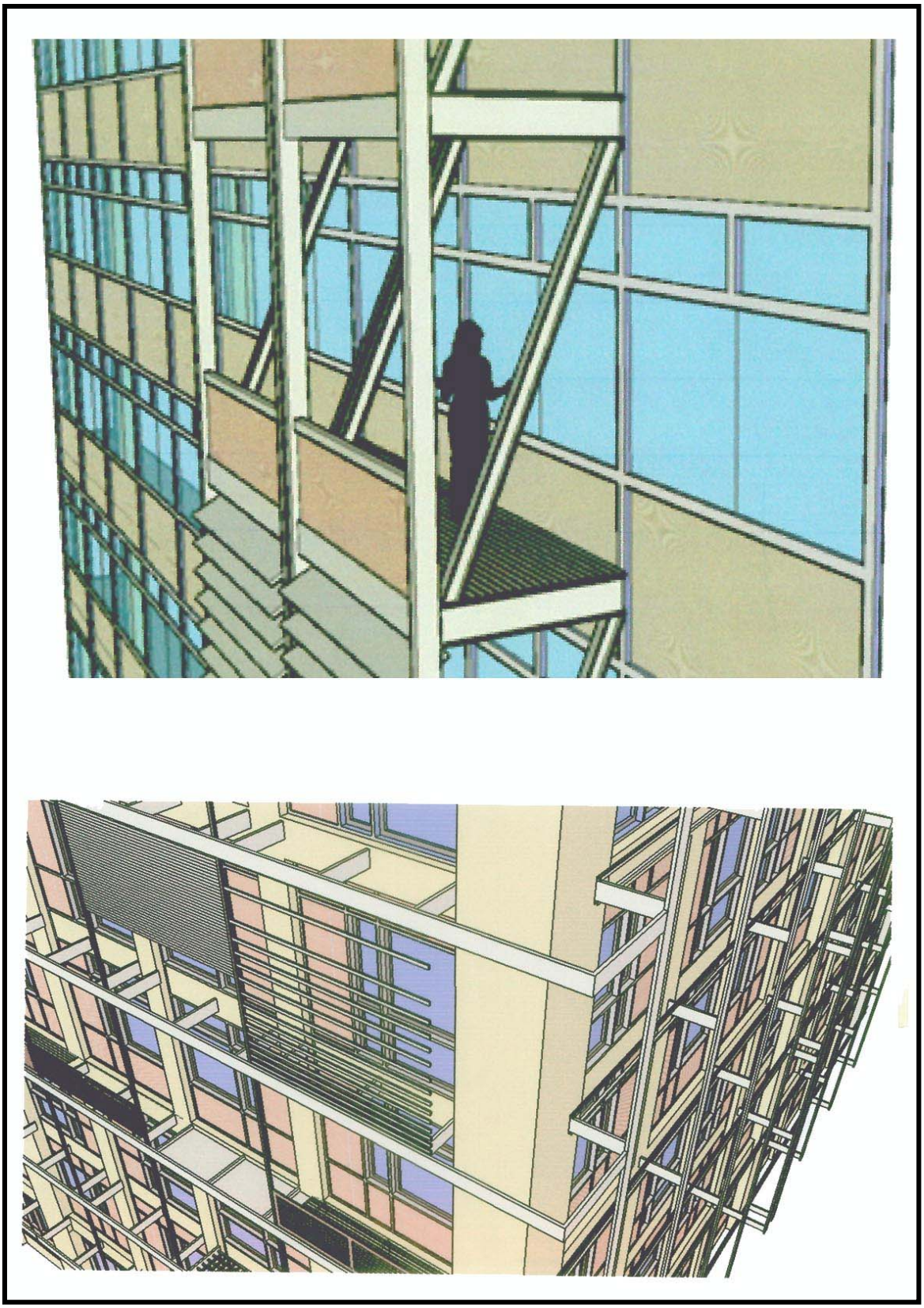


Figure 54: Outer Skin Process Continued

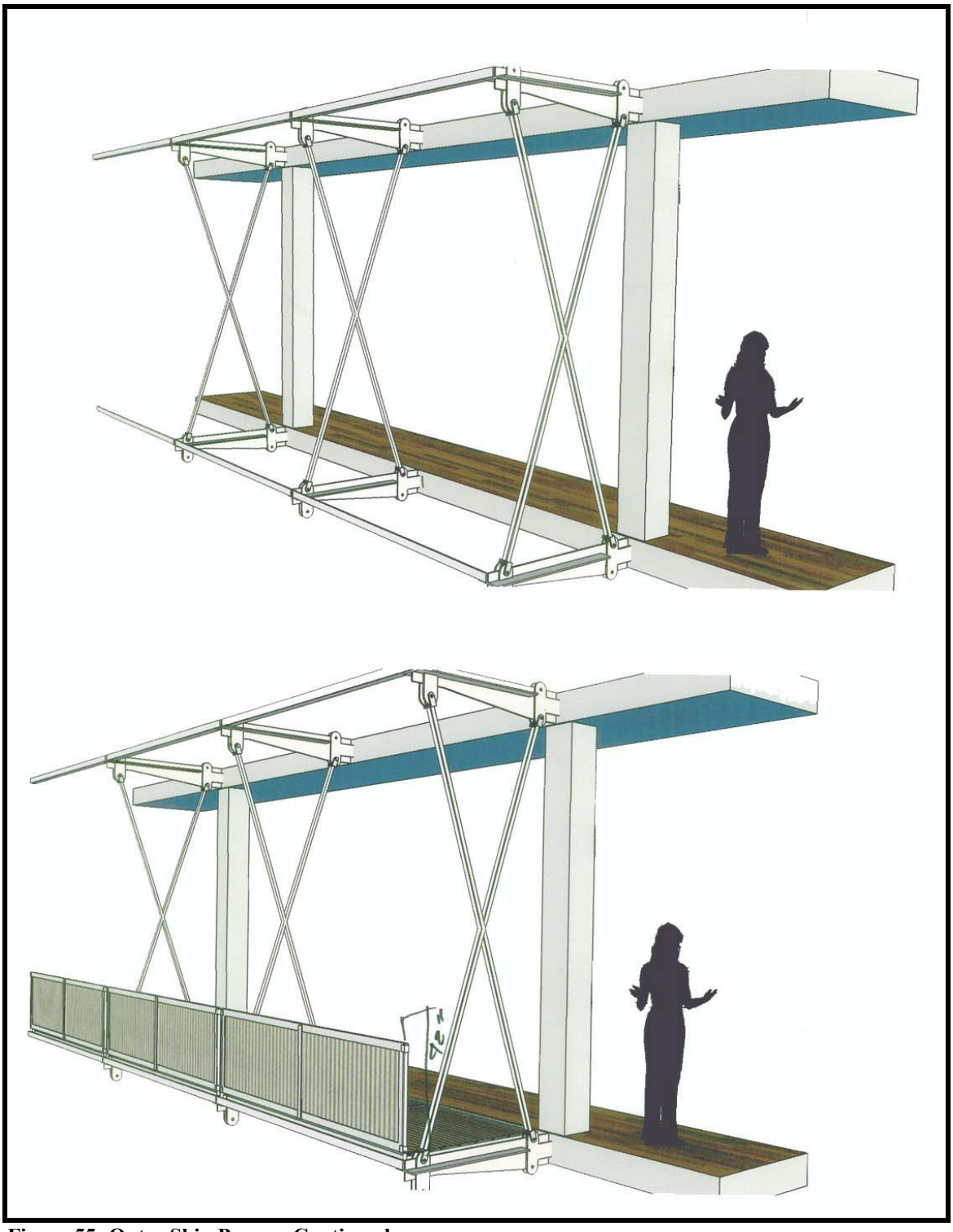


Figure 55: Outer Skin Process Continued

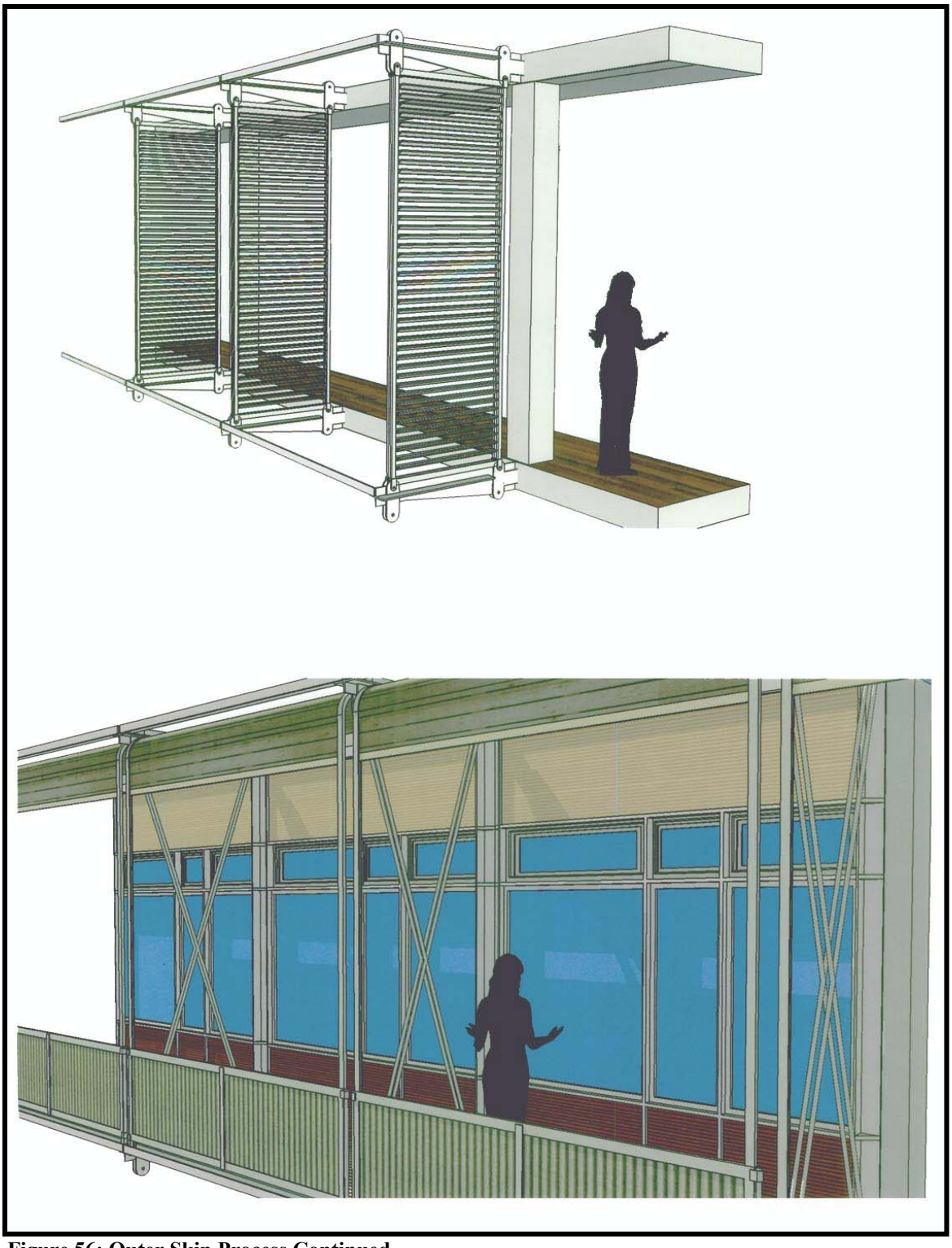


Figure 56: Outer Skin Process Continued

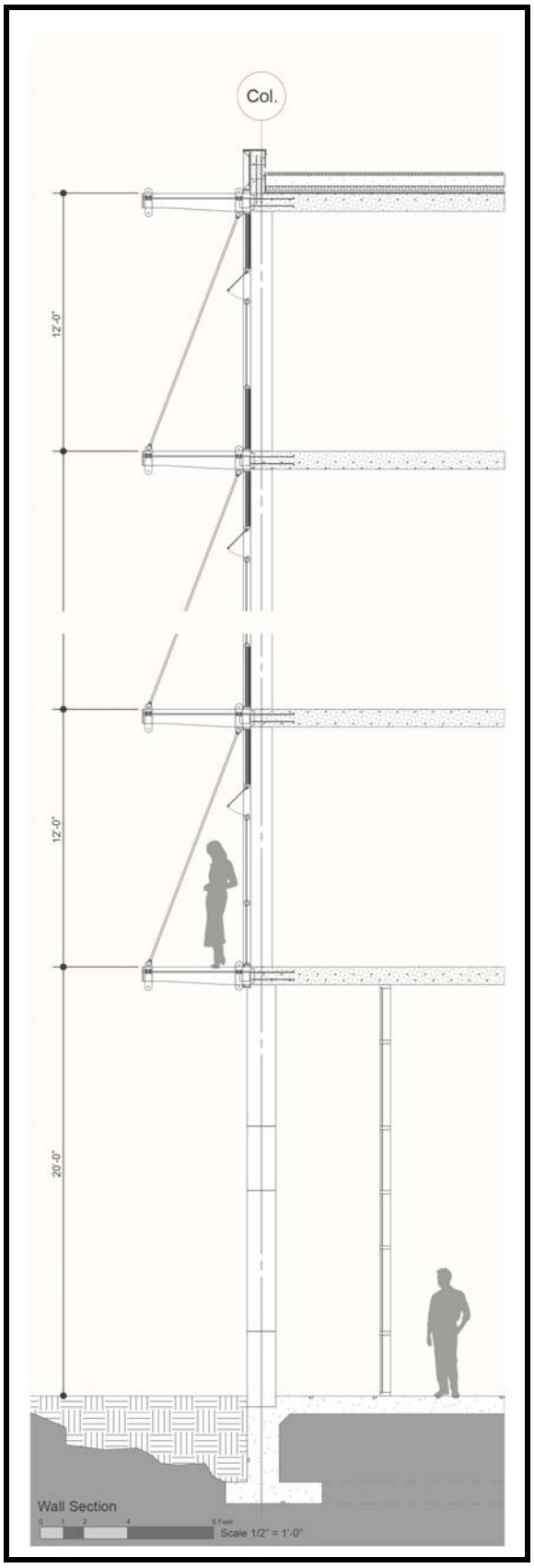


Figure 57: Final Wall Section

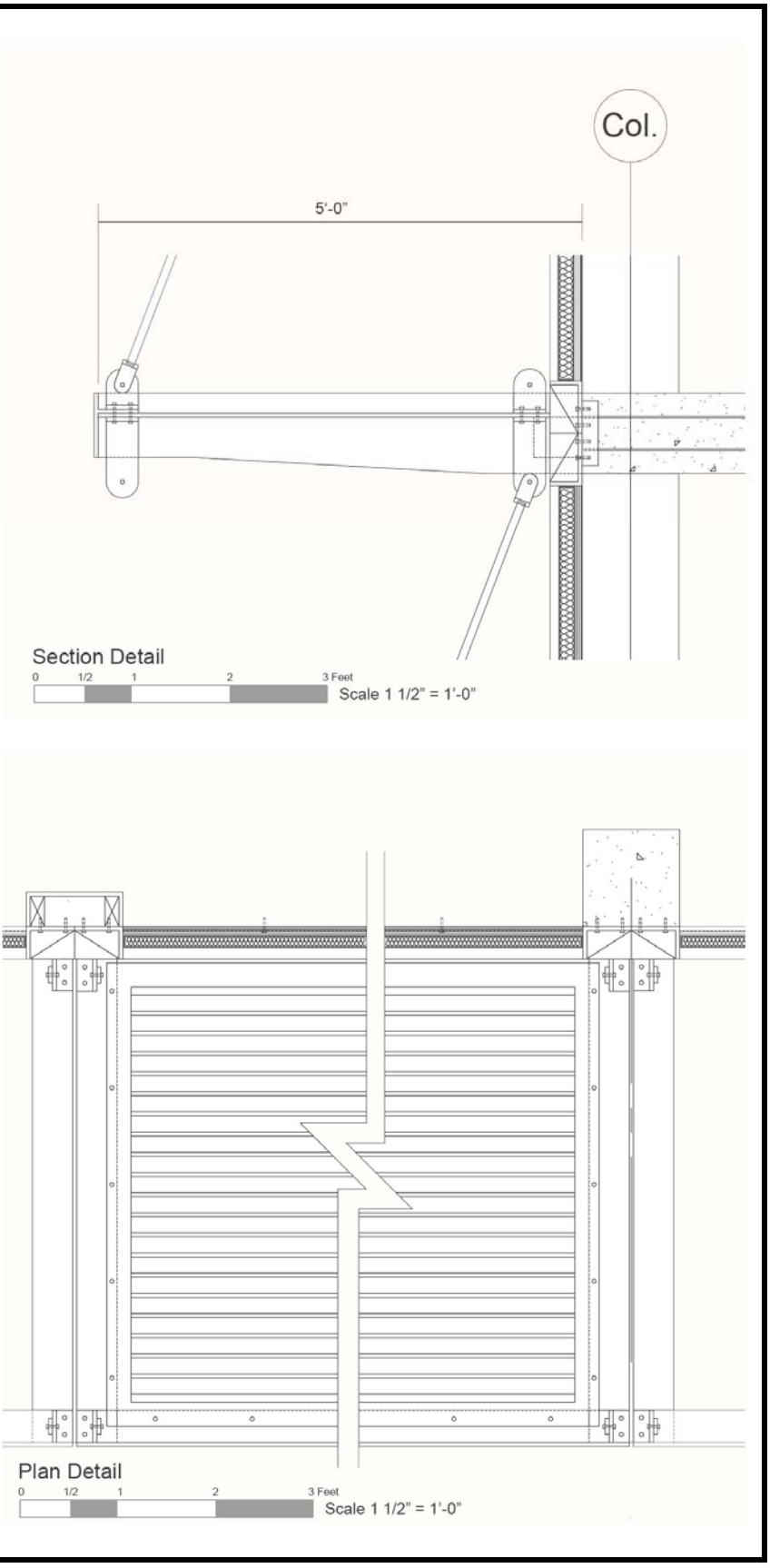


Figure 58: Connection Details

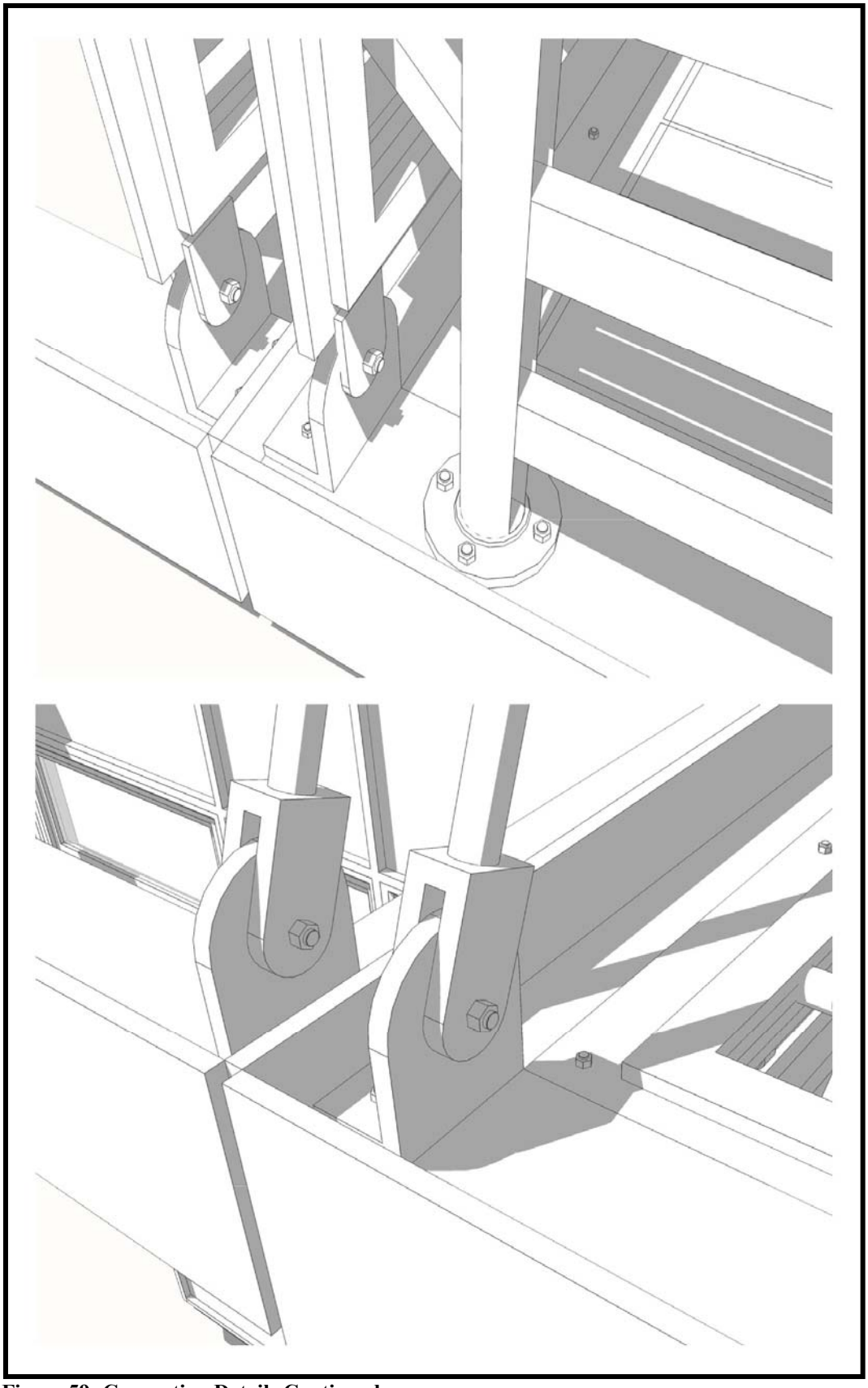


Figure 59: Connection Details Continued

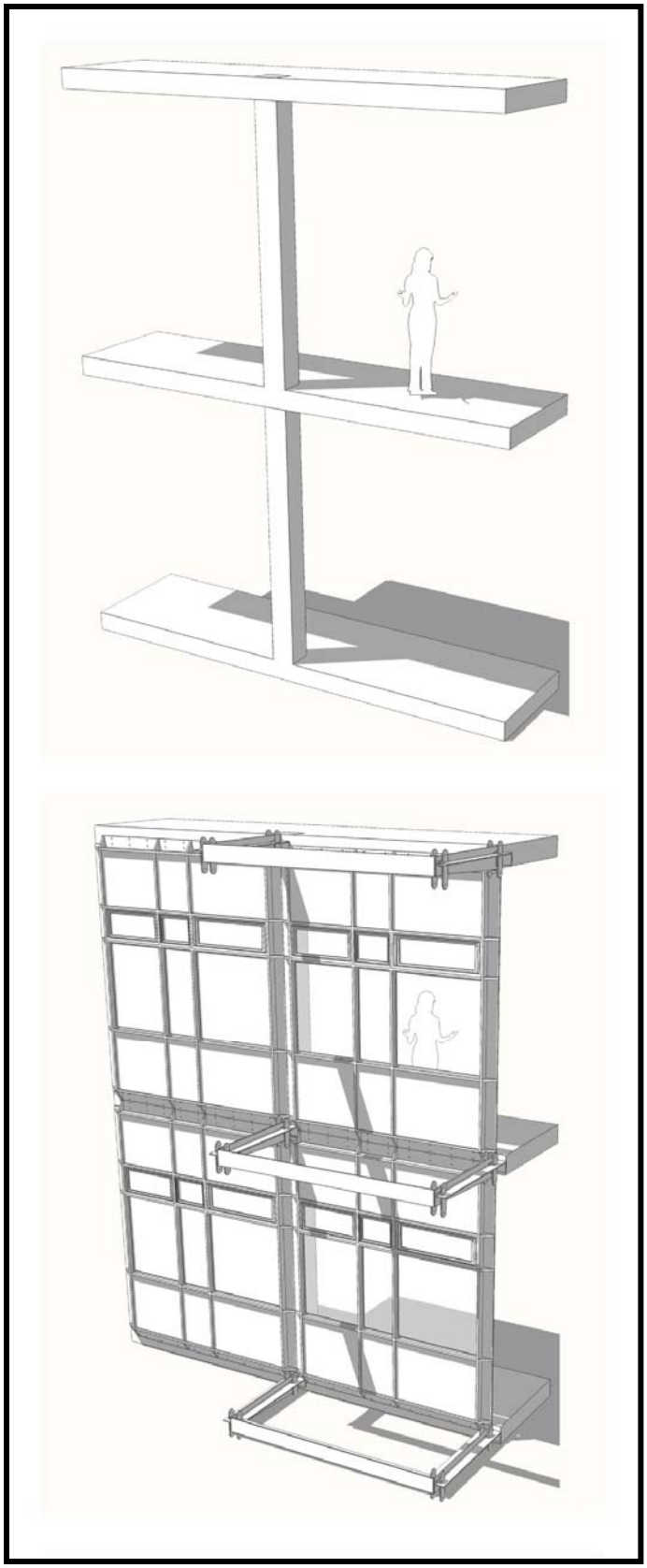


Figure 60: System Progression

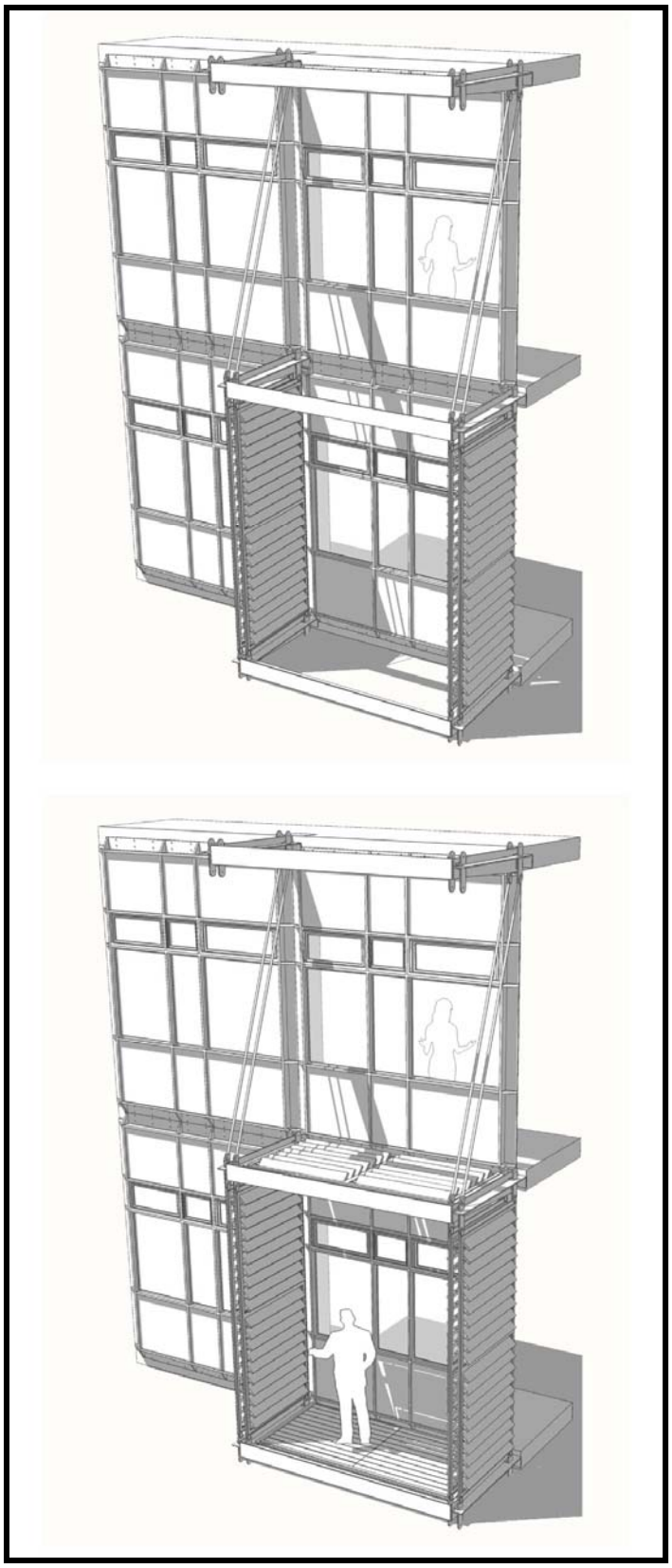


Figure 61: System Progression Continued

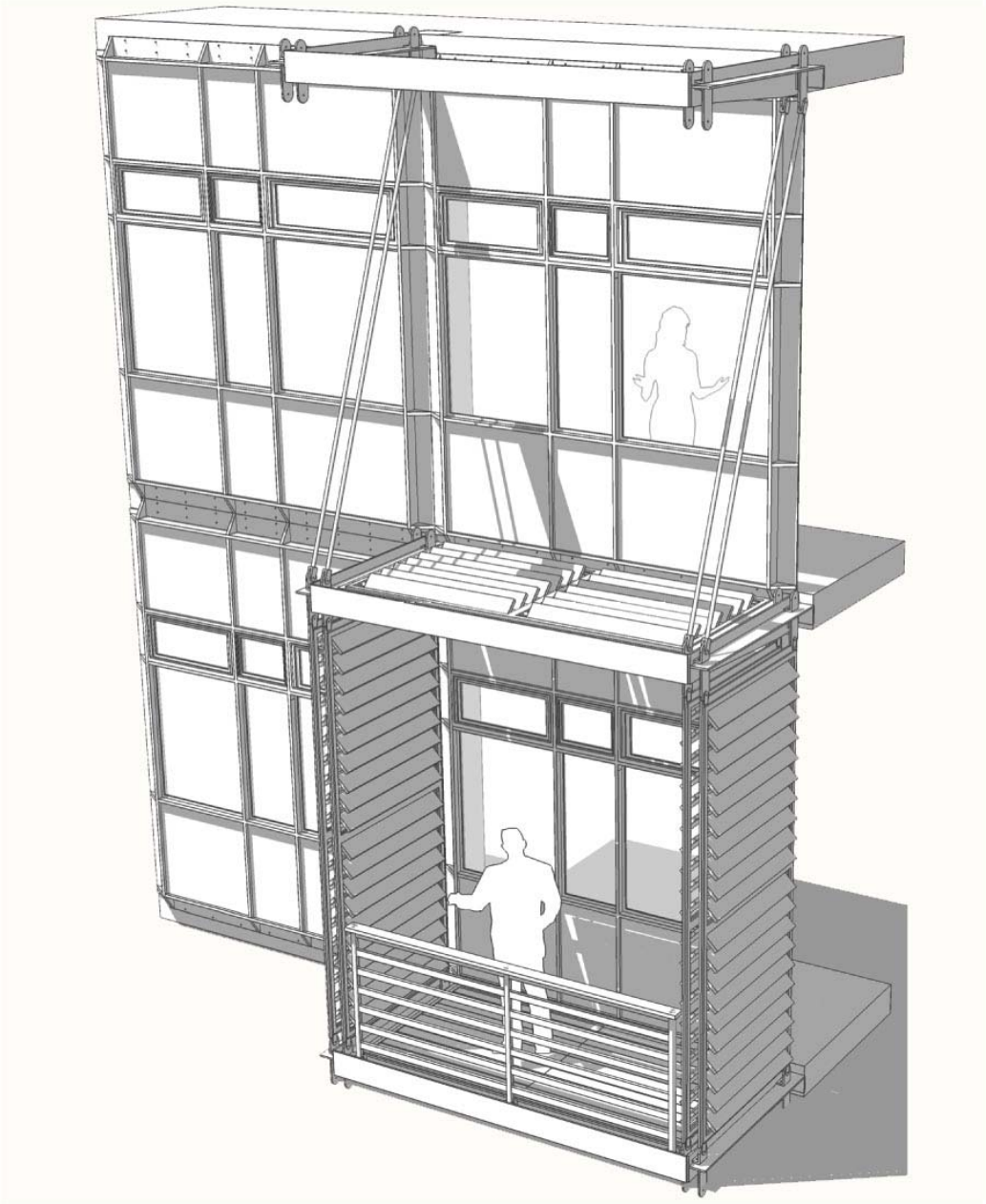


Figure 62: Figure Progression Continued

Testing the System

As a further exploration this system was tested in two locations within the urban design plan. Each of these locations has a different character and focus. Each site has different block conditions as well as different orientations.

Building A

The first test location is at the intersection of Landover Road and Brightseat Road, the regional center. This building has a footprint that measures 60’ by 160’. It is 10 stories tall and contains a mixture of residential, retail, and office functions. Its primary orientation is east/west.

Figure 63: Site Plan Building A

Figure 64: Site Section and Elevation Building A

Figure 65: 2nd Floor Plan Building A

Figure 66: 3rd Floor Plan Building A

Figure 67: Typical Residential Floor Plan Building A

Figure 68: Elevation Detail Building A

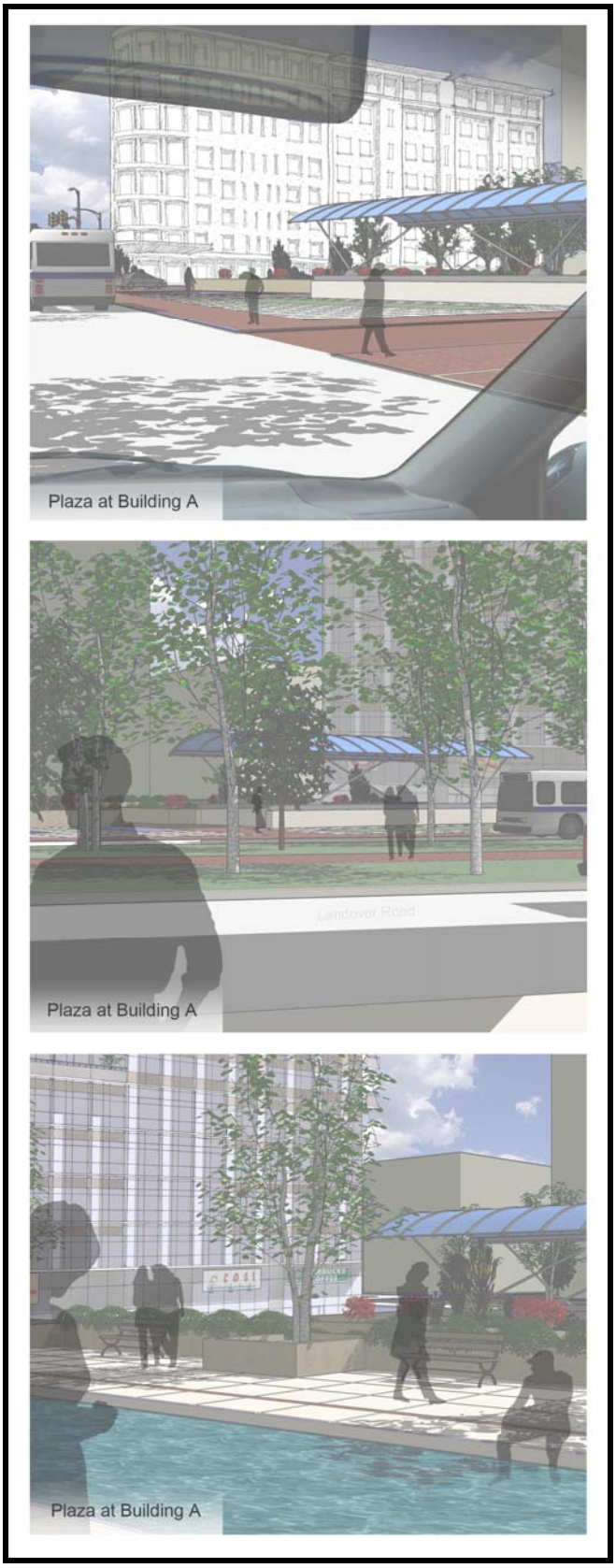


Figure 69: Character Perspectives Building A

Building B

The second test location is located in the community center just north of the community green. This building has a footprint the measures 60’ x 260’. It is 4 stories tall and contains a mixture of community and residential uses. Specific to this location is the inclusion of the new public library and the teen center.

Figure70: Site Plan Building B

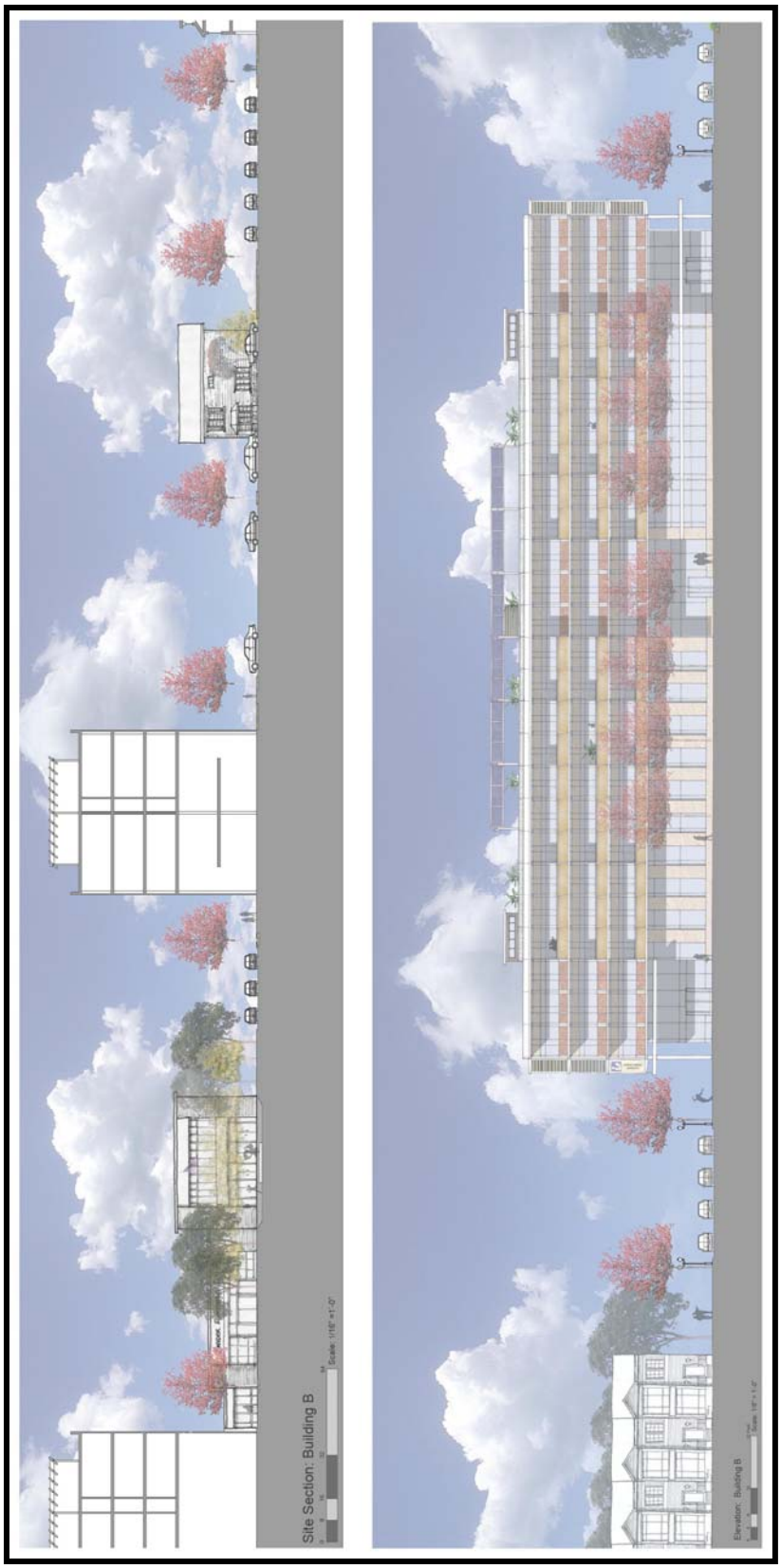


Figure 71: Site Section and Elevation Building B

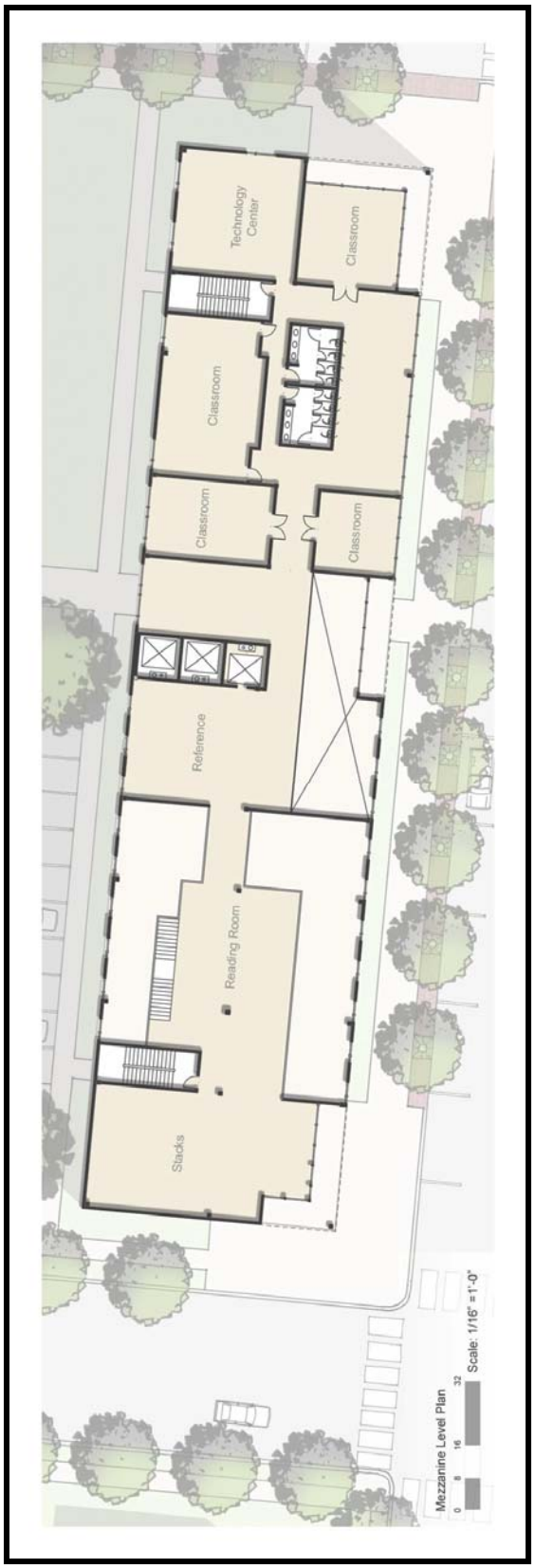


Figure 72: Mezzanine Level Plan Building B

Figure 73: Elevation Detail Building B

Figure 74: Character Perspectives Building B

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